

SOCIAL
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**STUDY OF
EXTERNAL MIGRATION
AFFECTING JAMAICA;
1953 - 55**

By
G. W. Roberts
and
D. O. Mills

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INSTITUTE OF SOCIAL AND ECONOMIC RESEARCH
UNIVERSITY COLLEGE OF THE WEST INDIES, JAMAICA, B.W.I.

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June, 1958

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FOREWORD

In 1955 when I became Chief Minister of Jamaica I was confronted with a difficult situation caused by the sudden expansion of the migration from Jamaica to England.

In 1953 the numbers involved were less than 4,000. In 1954 they more than doubled and were just under 10,000. In 1955 they nearly doubled again, the final figures being around 18,000. Since then the numbers have fallen. There was a small fall in 1956 and it is predictable that in 1957 the numbers will be down to about 12,000, which is not very much more than the 1954 figure.

This sudden increase caused special difficulties both in England and Jamaica. In England public attention to the migration increased enormously and there was considerable hostility in a section of the Press. In Jamaica it became obvious that the availability of skilled and semi-skilled labour might be seriously affected and there was some evidence that agricultural holdings were being given up by persons minded to go abroad. I decided that the situation called for special studies of the migration to be made both in England and in Jamaica, and I am greatly indebted to the Institute of Social and Economic Research for the assistance they gave in making these two projects possible.

The Senior-Manley study that was made in England in 1955 did a tremendous amount of good getting the facts straight and putting them in their right perspective and in giving a large and increasing force of good will in England a working basis of fact, commonsense and good reason.

It has taken longer to complete the companion study which was projected in 1955 and relates to the local effect of this migration in the past few years.

We were very fortunate in being able to secure the services of Mr. G. W. Roberts, who in association with Mr. D. O. Mills of our own Government Service, has done a scholarly and quite monumental job. Those who have seen Mr. Roberts' book, *The Population of Jamaica*, will not be surprised to find the same care, exactness and depth of analysis displayed in this work. It is indeed a final and authoritative review of the subject and it deserves close study by everyone who is interested in the problems of our economic development.

There can be no doubt after reading this book that the migration is a significant and important matter with far-reaching effects. The extent to which our labour force of skilled and partly skilled persons has been depleted and the problems of replacement which this involves is only one example among many of the important aspects of the problem which this study discloses.

It is satisfactory to note however that in the end one is left with the conviction that Jamaica, on balance, has so far gained rather than lost from the

migration. This is not to suggest that migration is any answer to the problems of unemployment, because in the long run it is not, and in any event in Jamaica it is the employed and not the unemployed who are mostly found among the migrants. But if one weighs all the factors *pro* and *con* I think the right conclusion is the one I have reached.

May I end by offering my very sincere thanks and congratulations to the authors of this study which Government will find of great help and value.

N. W. MANLEY,

Chief Minister and Minister
of Development.

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PREFACE

This study of migration affecting Jamaica during the years 1953-55 has been undertaken at the request of the Government of Jamaica, who were anxious to have some indication of the magnitude and composition of the growing emigration to the United Kingdom, and of its possible effects on the island's labour force. The necessary arrangements for the work were made by the Ministry of Labour and by the Institute of Social and Economic Research, under whose auspices the project was carried out. Work commenced in February, 1956, and a draft report was submitted in November of the same year.

From the migration cards a series of 27 basic tabulations was prepared for each of the three years: 10 of these deal with arrivals into the island, while 17 cover various aspects of departures. These provided the material around which the study has been organized. Unfortunately it proved impracticable to incorporate them into the present publication, though, it should be noted, a limited issue of the 81 basic tabulations (mimeographed) was made some time ago. A list of these tabulations appears in an Appendix to the present study.

In view of the urgency with which the Government of Jamaica required information on the movement, every effort was made to complete the study as expeditiously as possible. Certain sections of the project which proved more difficult than we originally anticipated had in fact to be curtailed in order to make the analysis available without undue delay. For example, because of the lengthy operations involved, the collation process, which forms the subject of Chapter 8, was not carried to a satisfactory conclusion. In view of the fact that mechanical matching could not be used throughout, it was decided to limit the work on this aspect of migration to matching the arrivals with the departures of all Jamaican residents so that some refinements of the estimates of permanent and temporary migration affecting the resident population could be made. The complementary operation of matching in order to refine the number of arrivals into the island, the main use of which would be to correct the estimates of permanent immigration derived from the coding scheme adopted, proved very lengthy and was therefore abandoned.

The migration records of the Immigration Department were the principal source of the material utilized for the study, and the readiness with which the Chief Immigration Officer and his staff placed these at our disposal greatly facilitated our work. In particular Mr. Eric Brown of this Department lent the greatest assistance at all stages. We are also grateful to the Department of Statistics for providing accommodation and access to tabulation machines. Most of the administrative responsibilities fell on Mr. A. Abrahams and his

willing co-operation at all times was instrumental in bringing the work to a satisfactory conclusion. We also express appreciation of the competent work done by Mrs. W. Allison, who served as Supervisor for the project, by Mr. T. Dixon, who so accurately carried out the many sorting operations on the data, by Mrs. S. Ilgner, who prepared the manuscript, and by all the clerical staff employed. The Sugar Manufacturers' Association willingly initiated the enquiry on which Chapter 7 is based, and we should like to record our gratitude to Mr. D. J. Verity of this Association and to the staffs of the various sugar estates responsible for collecting the necessary material.

We are indebted to several persons for comments on the draft in this study. In particular we wish to thank Mr. Dudley Seers for the many improvements he suggested and Mr. Arthur Brown for his useful comments.

University College
of the West Indies.

August, 1957.

G.W.R.
D.O.M.

CHAPTER 1

BACKGROUND TO THE PRESENT MOVEMENT

The present emigration from Jamaica, with which this study is primarily concerned, can be viewed as a resurgence of a phase of external migration which commenced in the 1880's. Though affected to a much smaller extent than most of the territories of the Eastern Caribbean by external migration, Jamaica has nevertheless experienced an outward movement of some consequence during a period of over 40 years. This was never sufficient to induce, as in the case of the Eastern colonies, declines in population, but it sufficed to influence markedly rates of population growth.

The early emigration from the island was largely to nearby territories, Panama and other Latin American countries. The first large-scale movement developed in the 1880's, when the French began work on the Panama Canal. Jamaicans constituted a large proportion of the labour force used on this project, and though its abandonment in 1888 led to the return of many workers to the island, the intercensal interval 1881-91 witnessed a net loss to the population as a result of migration of about 24,000. Moreover, emigration to areas other than Panama developed during this period.

Though evidently small numbers continued to emigrate during the 1890's, it was clearly the commencement of the work on the Canal by American interests in 1904 that opened a new phase of emigration from the island. Unlike most of the other workers on the Canal the Jamaicans were not specially recruited for employment by the Canal Commission, but availed themselves of existing transport facilities to seek work there, and at the height of the work comprised a large proportion of the labour force. Even before the completion of the Canal in 1914 Jamaicans employed there, instead of returning to their native land, began to push farther afield.

Despite the cessation of work on the Panama Canal, the years 1911-21 witnessed a considerable increase in the outward movement, which indeed attained its highest peak in this decade. Several factors, both within the island and abroad, tended to create conditions conducive to large-scale emigration. The expansion of the fruit trade forged strong communication links with the United States and Cuba; indeed by the end of the nineteenth century 60 per cent of the island's exports were finding their way to the United States. A series of disastrous hurricanes led to great hardships in the banana producing parishes, during 1911-21. Moreover hardships connected with the first World War added to the forces making for emigration. As entry into the United States was relatively easy, this proved the first choice of emigrants, while substantial numbers entered Cuba also. It is estimated that 30,000 emigrated to the United States during this decade, while net migration to Cuba

can be put at about 22,000.^a The long intercensal interval 1921-43 disclosed no net emigration, but a net inward movement of about 25,000. However it seems safe to assume that some emigration, particularly to the United States, did take place after 1921, certainly up to 1924, the date of the introduction of stringent restrictions on immigration into that country. But for convenience of demographic analysis the significant phase of outward migration can be said to have ended in 1921.

A special type of migratory movement developed in the second World War, the shift of workers to the United States, mostly for farm work under special contractual arrangements with the United States Government. These temporary movements do not constitute genuine migration, though they have undoubtedly had some economic advantage to the island, because of the substantial sums remitted by workers to their families in the island.

Emigration to the United Kingdom constitutes a new phase of external migration, in effect a reappearance of a movement that attained some significance during the years 1881-1921. In terms of distances covered, however, the present emigration contrasts strongly with that of the past, which was largely to nearby territories. In consequence it is unlikely to give rise to the frequent returns to Jamaica, which were so characteristic a feature of emigration in the past.

The study of the factors behind migratory movements may be approached from different angles. One approach often used is in terms of a distinction between the internal and external forces responsible for their development, that is, the conditions within the sending country encouraging the population to emigrate and the conditions within the receiving country that attract them. Though usually complex, these factors may be primarily economic, political or religious. It is also convenient to distinguish sometimes between long-term underlying forces tending to induce emigration and the immediate factors responsible for precipitating the movement.

Undoubtedly economic factors loom large as causal elements in the recent emigration from Jamaica. At the same time the peculiar position of the United Kingdom in relation to the colonies creates conditions which make such movement very simple. Here also the factors responsible for the establishment of the movement are of a complex nature. However, for the purpose of this study it is convenient to consider the several elements involved in terms of three broad divisions: (1) the underlying motivating forces, that is, the existing conditions in the island and in the receiving country tending to induce population shifts; (2) the development of travel facilities to the United Kingdom which has made the transfer of the population possible; and (3) the ready access to the United Kingdom.

Underlying Motivating Factors

Perhaps the most significant factor in the economy of the island tending to stimulate emigration in recent years has been the high level of unemploy-

^aThe history of external migration from Jamaica is considered in G. W. Roberts, (18)

ment and under-employment. This was a powerful factor making for unrest in the 1930's, and though the war years eased the situation somewhat, the post-war period still showed evidence of grave unemployment. Unemployment is not an easy state to define, and in the West Indies satisfactory definitions of this state are particularly difficult. Even if we agree on some definition as to what constitutes a state of unemployment in Jamaica, then we have still to face the problem of designing measures of its incidence. The 1943 census data on unemployment in Jamaica, which show rates of unemployment as high as 40 per cent for the building industry and an overall rate of unemployment of 29 per cent, may, because of certain inherent weaknesses, exaggerate the level of unemployment in the island. But despite the known limitations of these census data they clearly emphasize the gravity of the unemployment situation among certain sections of the labour force.

The labour and employment situation during the war and in the immediate post-war period is conveniently summed up in the 1946 Annual Report on Jamaica:

"The importance of improved methods of agriculture and the extension of industrial activity have been emphasized by the problems arising from unemployment and under-employment. These problems were reduced during the war years for many reasons. About 10,000 men volunteered for the Services, of whom about 7,000 served overseas, mostly with the Royal Air Force. From 1943 to 1945, 48,619 farm and industrial workers were recruited for work in the United States of America where they earned high rates of pay and returned with considerable accumulated savings. Increased employment was also provided by the construction of the United States Base at Fort Simonds in Clarendon. With the end of the war these opportunities of employment were rapidly reduced. The construction work at Fort Simonds ceased, recruitment for work in the United States of America was reduced (only 7,797 Jamaicans went to the United States of America in 1946 as compared with 23,153 in 1945) and approximately 4,000 were released from the Services. All of these factors have increased the unemployment problem, which has been rendered more difficult to meet due to the fact that a number of projects which would have helped to relieve the situation were delayed owing to the lack of materials and trained technical staff. It has been particularly difficult to take effective steps to find employment for returning ex-servicemen. A re-absorption Department was set up in 1945 and in 1946 ex-servicemen's Assistance Boards were formed in all parishes working under the direction of a central ex-servicemen's Assistance Board. Schemes were prepared to assist ex-servicemen in land settlement, housing, and technical training, and provision was made for loans to men who wished to establish themselves in trades on their own account. There has unfortunately been administrative delay in putting some of these schemes into effect, one of the principal reasons for which was the necessity to ensure that only suitable land should be acquired for settlement and to check titles to small holdings which some of the men wished to acquire outside Government land settlements. Shortage of materials delayed construction of houses. While progress has been made in overcoming these obstacles the principal difficulty remains of finding suitable employment for the men who do not wish to avail themselves of these special benefits — particularly those in Kingston. This is a part of the general unemployment for which no quick or easy solution can be found" (2).

During the war, the high level of unemployment led to the establishment of a system of unemployment relief designed to provide work in the more depressed areas of the island. By 1943 the number of workers receiving relief reached 11,300 per month. Relief measures came to be centred more and more around the performance of productive work and emphasis on relief payments was reduced. The immediate post-war years constituted a very difficult period. The unsettled world situation and the general international

economic conditions had serious effects on the economy of the island, thus tending to depress the level of employment.

There was undoubtedly some improvement in the unemployment situation in Jamaica just before the commencement of emigration to the United Kingdom, but the long history of high unemployment that plagued the island left its stamp on the workers and constituted the major element in the "push" inducing them to leave the island. Powerful though these local forces appear it is generally acknowledged that many of the important migratory movements of the past and the present have been influenced more by economic conditions in the receiving country than by conditions in the sending country. This, for instance, has been definitely established in the case of Puerto Rican emigration. Here the volume of emigration has been shown to be closely associated with economic conditions in the United States. The rising movement from Jamaica to the United Kingdom has been in operation for only three years, a period much too short to permit the study of the inter-relationship between the volume of emigration and economic conditions in the United Kingdom. But the importance of the condition in the United Kingdom as a "pull" complementary to the factors making for emigration in Jamaica itself cannot be too strongly stressed.

During the post-war years the economic conditions in the United Kingdom have been relatively good, and employment has been at a very high level. There were ready job opportunities, and to fill these several schemes for recruiting European workers were put into operation. As will be shown presently, these conditions, indicative of the existence of remunerative positions open to West Indians, became fully known through the contacts afforded by the movement of Jamaicans to the United Kingdom in the war years.

An important factor motivating the emigration has been the wage differential between Jamaica and the United Kingdom. It is likely that the real wage differential is not in fact as favourable as many emigrants believe, but it is the belief and not the actual position which, at least in the short run, provides the true motivating force. The Report of the International Bank Mission which visited Jamaica in 1952 states:

Wages are undoubtedly low compared to those in industrialized countries. A comparison with wages in the United Kingdom appears most relevant because competition with Jamaican manufacturers will come primarily from that source. We have made this comparison both by using published statistical data and by gathering information from manufacturers in Jamaica with knowledge of wages in both countries. The latter information was perhaps most valuable because it pertained to identical activities. The comparison . . . reveals that the wage differential, while still great, has significantly decreased since 1946. Data compiled by the International Labour Office on wages in a number of occupations indicate that the wages for skilled and non-skilled labour were in that year respectively 25-50 per cent and 50-65 per cent lower in Jamaica than in the United Kingdom. The information collected from manufacturers, on the other hand, showed a differential of only 20-25 per cent for skilled labour and about 50 per cent for unskilled labour at the beginning of 1952. This reduction in the disparity is confirmed by official data which indicate that from 1946 to 1951 earnings in manufacturing in the United Kingdom increased approximately 33 per cent while earnings in Jamaica rose by 55 per cent (10).

Wage differentials are very difficult to assess, especially those between countries with widely different economic structures. Moreover, the paucity of data on conditions in Jamaica renders an assessment of the differential still more tenuous. However, in so far as emigrants and potential emigrants are able to, or believe that they can obtain more remunerative employment and in general attain a higher level of living in the United Kingdom than they can in Jamaica, the "pull" is greatly strengthened by the supposed wage differential.

Other elements besides the wage differential also tend to attract Jamaicans. The existence of a comprehensive social security system, providing financial assistance in the event of unemployment or illness, and virtually free medical treatment, add considerably to the attractions held out to Jamaican workers.

Transport Facilities

One of the conditions necessary for the development of large-scale emigration is the existence of adequate transport facilities. This is in fact a situation where demand and supply are closely inter-related. Doubtless demand for passages largely determines the supply, but the role of adequate transport facilities as a force making for the expansion of such emigration must be noted. For only if the services are sufficiently flexible to allow of ready increase at terms that prospective passengers are willing to pay can increasing demand for passages be effectively met. Travelling facilities can here be considered in the broad sense to include not only the provision of passages at rates prospective emigrants are willing to pay, but also the advisory services offered and, above all, the credit facilities granted to persons unable to make ready cash purchases of passages to the United Kingdom.

When considered in this wider context, the availability of transport facilities indeed assumes the form of a positive contribution to emigration to the United Kingdom. Within the short period of three years the provision of passages for emigrants to the United Kingdom has developed into a sizeable business. Numerous travel agencies have sprung up and many, though maintaining their headquarters in Kingston, have extended their operations throughout the island by means of sub-agencies.

The advertising campaigns promoted by competing agencies in urban and rural areas have apprised many Jamaicans of the possibility of emigrating to the United Kingdom. Some agencies have been paying specified sums to individuals who "sign up" customers. The facilities offered to their clients have also helped to promote emigration. The provision of passages on easy payment plans, or on the furnishing of securities and other credit facilities have greatly extended the range of persons able to emigrate. The truth of the saying, "Travel begets travel", has been well illustrated in the development of this movement. The close interaction between the demand for more travelling facilities, and the provision of more and cheaper facilities by the transporting companies has constituted an important element making for the expansion of the movement.

The development of travel facilities serving Jamaica can best be indicated by the growth in the number of passengers arriving and departing during the past ten years. Between 1945 and 1955 the number of arrivals rose from 25,900 to 64,100, while over the same period the number of departures rose from 23,500 to 83,000. Equally relevant is it to note the increase in the value of external trade. This rose from £14½ million to £79 million and though much of this is accounted for by the development of the bauxite industry, the expansion of other industries has doubtless contributed greatly to this overall rise. The expansion of external trade has inevitably involved an expansion in shipping services.

The growth of the travel facilities of all kind available to Jamaica is perhaps best shown in the rising numbers of ships and aircraft leaving the island; these are summarized in Table 1A. This shows that there has been within the post-war years an appreciable rise in the number of ships and aircraft serving Jamaica. The rise in the number of aircraft is particularly relevant to the present discussion, since, as will be indicated in the course of this study, most of the early movement to the United Kingdom was effected by means of aircraft. It is not intended to argue that the increasing transport facilities reflect solely the rising demand for passages to England. The large

TABLE 1A. NUMBER OF SHIPS AND COMMERCIAL AIRCRAFT LEAVING JAMAICA, 1946-55

Year	Ships Departing to			Aircraft Departing to	
	U.K.	U.S.	All Countries	U.S.	All Countries
1946	84	87	512	1,043	3,228
1947	89	69	621	2,543	4,128
1948	108	82	760	966	4,306
1949	113	77	765	1,042	4,488
1950	97	100	764	853	5,078
1951	77	81	769	858	5,036
1952	66	78	877	831	5,059
1953	143	106	1,043	902	5,644
1954	145	123	1,014	1,028	5,228
1955	111	137	1,140	1,829	5,853

and probably more remunerative tourist travel is responsible for a sizeable proportion of the increase, especially in the flights originating in the United States.

The report of the Commonwealth Shipping Committee on West Indian Shipping Services emphasized the inadequacy of passenger accommodation available in the post-war years and drew attention to the several features of both commodity trade and passenger traffic in the West Indies. The position in regard to passenger services by sea between this area and the United Kingdom is summarized in the following statement:

It became clear in the early stages of this enquiry that the passenger facilities by sea between the West Indies and the United Kingdom were inadequate . . . The six banana ships (Ariguaní, Bayano, Cavina, Eros, Manistee, Jamaica Producer) together with the two new vessels of the Pacific Steam Navigation Company and the *Reina del Pacifico*, should eventually provide accommodation between the United Kingdom and Jamaica for about 2,700 persons annually each way. These facilities should meet the demands of the business and official communities though they will leave little room for the tourists (12).

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The Committee commented on the great increase in air services since 1939, and showed that in the absence of a satisfactory British sea passenger service during the war and immediate post-war years air services provided an indispensable means of travel.

Since the present movement produced special demands for travel facilities it was most unlikely that the normal travel services could have provided the basis for the necessary expansion, though undoubtedly in the initial stages most emigrants utilized existing facilities. The increased accommodation came not so much from existing vessels in use, but from new and special ones brought into service, offering a large number of relatively inexpensive berths to the United Kingdom. Many of these were primarily engaged in transporting emigrants from Europe to South American countries and had ample accommodation for West Indians on their return journey. Some went directly to British ports, but others carried their passengers to continental ports, leaving them to complete their journey overland and then across the English Channel.

The special ships carrying emigrants to the United Kingdom, their nationality and the number of trips they made are shown in Table 1B. Whereas in the initial year of the movement there were only 3 ships of this type involved, in 1954 there were 6 and in 1955, 13. The number of trips made by these ships rose appreciably between 1953 and 1955. In the former year the 3 ships concerned made a total of only 5 trips, whereas in 1955 the 13 ships made 40 trips. During the peak year of the movement 1955, the major carriers were Italian vessels, which made 31 out of the 40 sailings involved. That the movement is largely promoted by non-British transport appears from the fact that less than one-tenth of the 62 sailings between 1953 and 1955 were made by British ships.

It is of interest to note how many passengers were transported from Jamaica by these major carriers in the three years under review. The numbers

TABLE 1B. MAJOR SHIPS INVOLVED IN TRANSPORTING JAMAICAN EMIGRANTS TO THE UNITED KINGDOM, THEIR NATIONALITY AND THE NUMBER OF SAILINGS MADE, 1953-55

Nationality of Ships	Number of Ships			Number of Sailings		
	1953	1954	1955	1953	1954	1955
British	1	2	1	1	3	2
French	2	2	—	4	8	—
Italian	—	2	8	—	6	31
Spanish	—	—	1	—	—	1
Portuguese	—	—	2	—	—	5
Other	—	—	1	—	—	1
Total	3	6	13	5	17	40

carried are summarized in Table 1C. It can be seen that all sailings in 1953 consist of less than 300 passengers. In 1954 nearly one quarter of the total number of sailings involved more than 300 passengers. In 1955 only 17 of the 40 sailings showed less than 300 passengers bound for the United Kingdom, while 12 involved more than 500. It is thus clear that the num-

ber of passengers carried on each ship increased considerably between 1953 and 1955. In 1953 the 5 sailings took 470 emigrants to the United Kingdom, the average number per vessel thus being 94. In 1954 3,220 passengers went on the 17 sailings recorded for that year; thus the average number per sailing (190) was more than twice that of 1953. In 1955 the ships on this route carried 14,830 passengers, an average of 370 per trip, that is about twice the size per sailing in 1954 and four times that of 1953.

TABLE 1C. DISTRIBUTION OF NUMBER OF PASSENGERS CARRIED ON MAJOR VESSELS, 1953-55

Number of Jamaican Passengers	1953	1954	1955	1953-55
Less than 100	4	10	3	17
100-199	—	1	7	8
200-299	1	2	7	10
300-399	—	2	7	9
400-499	—	—	4	4
500-599	—	1	3	4
600-699	—	1	5	6
700-799	—	—	4	4
Total	5	17	40	62

In the course of this study attention will be drawn to the seasonal aspect of passenger travel, evident even in the case of persons going to seek work in the United Kingdom. It is important therefore to consider the seasonal departure of these major passenger vessels. The sailing dates are summarized in Table 1D. In both 1954 and 1955 the majority of sailings took place in the latter part of the year, while the last quarter accounted for a very large proportion. It will be seen in Chapter 4 that the movement to the United Kingdom is heaviest in the months of August to October, but it is not clear how this is interrelated with the dates of sailing of the vessels concerned, and in particular whether fluctuations in demand for passages at various times of the year govern the times of sailing of the vessels, or whether it is the time at which vessels can be made available that gives to the pattern of departures its seeming seasonal character. But there is some indication of a decline in the number of passengers per sailing in the last quarters of 1954 and 1955.

TABLE 1D. SEASON OF DEPARTURE OF MAJOR PASSENGER-CARRYING VESSELS TO THE UNITED KINGDOM, 1953-55

Season	1953	1954	1955	1953-55
January-March	1	3	8	12
April-June	1	2	8	11
July-September	3	5	8	16
October-December	—	7	16	23
Total	5	17	40	62

The rise in the number of passenger vessels emphasizes that the emigration to the United Kingdom has been largely effected by surface vessels, and this will be confirmed in Chapter 4, where the declining importance of air travel to Britain will be shown.

Access to the United Kingdom

It is a feature of the modern world that most countries now impose restrictions on the entry and often on the exit of persons. These restrictions apply to temporary movements, such as travel on holiday, business and study, as well as to permanent movements.

Many of the prevailing restrictions were introduced soon after the first World War, and they were reinforced during the inter-war years by political forces generated by international tension, as well as by economic conditions. The second World War and the years following it witnessed the imposition of still further restrictions on international travel. Entry into most countries now calls for visas, health certificates of various kinds, police certificates, often the possession of a return ticket, and other requirements. Quota systems have also been instituted in many countries for the purpose of controlling immigration, while in some instances agencies have been established for the selection of immigrants in an effort to ensure that they conform to certain requirements. Jamaica has itself invoked immigration restrictions. Even citizens of the United Kingdom coming to Jamaica are not allowed to remain permanently unless they have evidence of permanent employment in the island or are in possession of certain sums of money, while landing even for temporary purposes is apparently permissible only if the passenger is in possession of a return ticket.

Inevitably these restrictions and requirements have tended to control the nature, dimensions and direction of international travel, despite the potentialities of vast international movements created by the swiftly growing transport facilities, the rising levels of income and consequent enhanced ability to travel from one country to another.

The rigid restrictions on entry have affected emigration from Jamaica profoundly. It has meant that two areas which in the past absorbed appreciable numbers of Jamaican emigrants are now largely closed to the island's population. Central America and Latin American countries of the Caribbean in general have, like most other countries, instituted restrictions on the entry of immigrants. In any event, however, it remains doubtful whether Jamaicans would regard entry into these areas as favourably as they did in the past. The United States, still regarded by many Jamaicans, in common with people from many other countries, as the land of opportunity, has likewise closed its doors to large-scale immigration from the West Indies. Restrictions, both against visitors and intending immigrants, gradually tightened until the final rigid system under the McCarran Act was established. The only scope for appreciable movements to the United States at present is the temporary movement of farm labourers for work under contract, which has been in force since the second World War.

Possibly the only industrial country now open to large-scale emigration from the West Indies is the United Kingdom. Jamaicans and indeed peoples of the colonial territories in general have few administrative obstacles in their

way when entering the United Kingdom. The possession of a valid passport (which is readily obtainable in Jamaica) is the chief requirement. No visa is required, while health certificates, work permits and other requirements are not called for. Even stowaways are not always ejected from the country. The stowaway who is apprehended in the United Kingdom is usually tried and sentenced to imprisonment for a short period, but if in possession of a valid passport he is, on release, free to take up permanent residence in the country. Such open access as is afforded by the United Kingdom to Jamaican emigrants contrasts markedly with the restrictions in force in most Western countries. As Senior and Manley point out, the West Indian is a "citizen of the United Kingdom and Colonies", according to the British Nationality Act, 1948, and for this reason they elected to term the movement to Britain migration and not emigration (20). The granting of full British citizenship confirmed the right of entry of Jamaicans into Britain without restriction.

Historically there has always been a migratory link between Jamaica (and indeed the West Indies at large) and the United Kingdom. Throughout the early periods of settlement and up to the late nineteenth century Europeans in the West Indies maintained a constant contact with the United Kingdom. Planters, merchants, soldiers, government officials came and went in a small but steady stream. With the development of a middle class of coloured persons, this movement spread to the non-European elements of the population. But up to about the time of the second World War these contacts remained essentially limited to travel of these selected elements for social, educational and business purposes. Emigration of artisans and clerical workers to the United Kingdom in search of permanent employment was virtually unknown.

This situation was changed radically during the second World War, when large numbers of Jamaicans went to England as members of the armed forces or as factory workers. Recruiting of Air Force personnel and factory workers was not confined to the upper and middle classes; large numbers of the members of the working classes from both urban and rural areas volunteered for service. The total numbers going to England under these conditions probably amounted to 8,000.

This led to the "discovery" of the United Kingdom as an avenue open to emigrants of all types from Jamaica. There is little doubt that this factor of being brought into contact with the new environment and seeing the possibilities of employment there has been instrumental in setting the present movement afoot.

Other parts of the British Commonwealth do not at present appear to offer any avenues for the absorption of Jamaican emigrants. Most of these, while still actively engaged in fostering immigration, are looking to the United Kingdom and other European countries for settlers. Canada, the one Dominion in the Western Hemisphere, has for a long time had strong trade links with Jamaica. The possibility of Jamaicans emigrating to Canada has been put forward on several occasions; and indeed many would eagerly emigrate to

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that country if the opportunity presented itself. But prevailing restrictions entirely rule out any large-scale movement in this direction. The only emigration of working-class persons to Canada witnessed recently is a token movement of domestic workers, which proceeds under strict control measures. Likewise the prospects of emigration to colonial territories of low density seem dim. British Guiana and British Honduras, the only mainland British Caribbean territories, have, in view of their comparatively large area and very low density, long been regarded by many observers as the most suitable area for settlement of populations from the more densely settled islands of the West Indies. The Evans Commission reported on the possibilities of such settlements in these terms:

We can make no precise estimate of the number of people who might be able to migrate to the two colonies for employment on the schemes which we propose, but we believe that if our plans can be accepted it should be possible over a period of ten years for the two colonies to absorb about 100,000 men, women and children including about 25,000 adult workers. . . . For reasons which we shall adduce we believe that migration on such a scale to land settlements where settlers would be left largely to their own devices would be doomed to failure; and therefore that, if the scheme is to succeed, useful work must be provided for these people in advance. The schemes of development must be planned and phased and migration must be timed accordingly (13).

Discussions of the merits and demerits of this Report are not relevant here. But in view of a number of recent developments the chances of any emigration of the type envisaged by the Evans Commission being promoted are now remote.

It is clear that the avenues open to Jamaican emigrants are severely limited. It is not surprising therefore that once the fact of the ease of access to the United Kingdom was established and the relatively favourable economic situation there made plain, this country should become the recipient of the present flow of emigrants.

Despite the absence of legal restrictions against West Indians entering the United Kingdom, their integration into the social and economic life of the country is not always smooth. There are areas of conflict between West Indians and the English and these have engaged the attention of those now studying the general problems created by the contact of these two racial groups. These aspects of migration are not relevant to this study. However it is relevant to consider some of the views expressed on immigration of this type into Britain by certain interests in the country before the movement actually began.

The Royal Commission on Population evidently viewed the immigration of non-Europeans into Britain with disfavour, though the general terms of their argument do not necessarily imply any specific objection to Jamaican immigration.

It seems on the whole likely that the present boom in emigration will be short, emigration will tend to diminish, and there may be continuing pressure to bring in immigrants to make good shortages in particular occupations. This project we regard as among the undesirable consequences of a sub-replacement family size because (a) the sources of supply of suitable immigrants are meagre and the capacity of a fully established society like ours to absorb immigrants of alien race and religion is limited, and (b) a diminishing flow of British emigrants to other parts of the Commonwealth

may have serious consequences for the economic and political future of Great Britain and the Commonwealth as a whole.

Elsewhere the Commission states (in discussing the possibility of the United Kingdom continuing to supply the Commonwealth with migrants of British stock while replenishing its own human resources by fostering immigration):

Even however if it were found practicable to secure a net inward balance of migration on anything like this scale, we should have to face serious problems of assimilation beyond those of training and housing; immigrants on a large scale into a fully established society like ours could only be welcomed without reserve if the immigrants were of good human stock and were not prevented by their religion or race from inter-marrying with the host population and becoming merged with it (14).

This suggests that West Indian immigrants, very few of whom would probably be considered "good human stock", eligible for "inter-marrying with the host population and becoming merged in it", would hardly be acceptable in terms of the types of immigrants envisaged by the Royal Commission as capable of taking the place of those leaving for the Dominions.

However, a debate on Jamaica in the House of Commons in 1949 showed that many persons definitely favoured the immigration of Jamaicans into Britain (11). Mr. Driberg claimed that "we in this country . . . have a very definite, direct duty and responsibility to those ex-servicemen who came here as volunteers during the war and served three or four years . . . The resettlement of these men . . . has been gravely mishandled". In his view the expenditure on E. V. T. courses "in all sorts of technical skills" was wasteful, as the Jamaicans went back to a country where no suitable jobs were available. He advocated immigration of Jamaicans into the United Kingdom but evidently for military service. He also remarked, "We are at present looking closely into the possibilities of employing surplus colonial labour in the United Kingdom". Mr. Gammans, though holding that "we cannot help it if reproduction [in Jamaica] outpaces production", was against "that sort of haphazard emigration" to Britain, characterized by the Jamaicans reaching England in the *Empire Windrush*. However, in view of the shortage of hospital nurses and ward maids in Britain he suggested offering facilities for Jamaican girls to come to England to do such work. Mr. Creech Jones, speaking for the Government said, "We have set up a Committee here to discover to what extent colonial labour can be absorbed into the industries of the country" but no information on the findings of this Committee has been obtained. There was however nothing in the debate to suggest that any member of Parliament held that emigration from Jamaica to Britain would solve the economic problems of the island. Nor, on the other hand, was there any expression of the view that immigration of Jamaicans would be met by hostility on the part of what the Royal Commission called the "host" population.

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CHAPTER 2

ORGANIZATION OF THE STUDY

Numerous studies have been made of the effects of immigration on population growth and economic development in the receiving countries. The country most affected by modern immigration, the United States, has in particular received considerable attention in this respect. On the other hand, the study of the effects of emigration on the population and general position of the sending country has received less attention. Indeed so far as the so-called underdeveloped countries are concerned writings on this subject remain for the most part conjectural. This is not surprising. For the assessment of the effects of emigration on any population can never constitute a neatly determinate problem, amenable to straightforward statistical and economic measurement. Even where extensive records on the population and economy of the sending country are available, such assessments are beset with numerous difficulties.

An assessment of the effects of emigration on Jamaica must inevitably be seriously restricted in scope by the marked limitations of the data available. It is true that, as will be shown in the course of this study, the present migration records of the island are quite adequate. But the most recent census data are thirteen years old, while statistics on many features of the island necessary for a careful consideration of the effects of migration are entirely lacking. There has of course been a sample census taken in 1953, but unfortunately its results are not as yet available. In the absence of any recent and comprehensive data on such population characteristics as occupational distribution and wages, we have been forced to rely heavily on the census data of 1943, despite the fact that between 1943 and the present time there must have been several changes in the occupational pattern of the population. Moreover, the marked rapidity with which the movement has gathered momentum has meant that there has been, so far, very little time within which to accumulate any substantial body of information on its main features.

Though the movement has achieved appreciable dimensions only in 1954, there are already several studies of it. The first attempt to consider its main features is W. F. Maunder's study, which aptly terms the movement "the new Jamaican emigration" (9). In his examination he drew attention to the possible implications for Jamaica of a movement which evidently is depleting the skilled sections of the labour force to an appreciable degree. But in a broader context the movement has implications quite distinct from its effects on the population of Jamaica. The shift of West Indians to Britain presents to students of migration and race relations many interesting social and economic problems, and a few studies of these aspects of the movement have already appeared. C. Senior and D. Manley have considered various aspects

of the life, work and welfare of West Indian migrants in Britain, while A. H. Richmond, S. F. Collins and M. P. Banton have treated various aspects of the life of coloured persons in the United Kingdom (20, 16^a).

The present study surveys the magnitude of the several components of the inward and outward movements affecting the island during 1953-55 and seeks to assess some of the implications of these movements. Its approach is largely demographic, and its principal object is to present a comprehensive analysis of the information contained in Embarkation/Disembarkation cards for the years 1953-55. Provision is made for the inclusion of not only the study of (permanent) immigration and emigration as understood in modern demographic literature, but also of the study of certain categories of temporary migrants and "quasi-migrants", as Julius Isaac calls them.^b The organization of the study of the migration cards, it should be noted, owes much to Dr. Isaac's work on British post-war migration, but it covers a very short period and is much more limited in its analysis.

Although the major portion of the study rests on analyses of the migration cards and of the data yielded by these in conjunction with other demographic material available from the 1943 census and from current estimates of the Registrar General, a brief attempt is made in Chapter 7 to consider data collected from some establishments, which, according to the general analysis, have experienced some notable depletions of their labour force as a result of emigration.

(1) *The Study of the Migration Cards*

This aspect of the study is based entirely on an analysis of the Embarkation/Disembarkation cards filled up by persons entering and leaving the island during the years 1953-55. As these cards are only one part of the system of registration of migration now in force in Jamaica, a brief survey of the several types of migration records in use is necessary. Each person has to complete a document when entering or leaving the island. Such entries, which in most cases represent the information on the person's passport or other travel document, are usually checked by the immigration authorities as passengers embark or disembark, and consequently the data they contain are reasonably reliable. The registration of travellers can conveniently be discussed in terms of the four methods employed.

The first kind of registration applies to certain types of tourists, mainly those from the United States, who do not travel on passports. Persons falling within this group are not normally permitted to remain in the island under tourist status in excess of six months, and they are not expected to engage in any gainful occupation while in the island. They complete a Tourist Landing Card (blue or green) which is in two parts, one of which is surrendered

^aBoth of these contain bibliographies relevant to the study of West Indian emigration in recent years. In an earlier study (15) A. H. Richmond considered the position of West Indians who had emigrated to Britain in 1941-51.

^bFor the standard terminology recommended by the United Nations, see (24) and also Julius Isaac, (8).

to the immigration authorities on landing and the other when the tourist departs. By matching these two parts the immigration authorities can confirm that the tourist has left the island.

A similar scheme of registration is in force for temporary halt passengers, that is persons landing temporarily from cruising vessels. These are supposed to complete Cruise Passenger Landing Cards (white), which also are in two parts, one of which is surrendered on landing and the other on embarkation. In practice however when very large numbers of passengers are involved a simple statement of the total number landing is given by the captain of the ship to the immigration authorities. Where each passenger completes a landing card the first part is surrendered on landing and the other on embarkation, so that once more a check can be made as to whether the person has left the island.

The third type of registration applies to farm workers travelling to the United States to engage in work under contract. These are in effect temporary emigrants, and do not normally travel on passports. The special cards they complete are also in duplicate, each part containing a photograph of the person, and constitute travel documents in lieu of passports. Again the idea behind the duplicate record is to ensure that the temporary migrant returns to the island on the completion of his contract of service.

Unlike the three foregoing methods, all specially designed to facilitate the matching process around which the control of alien migration largely centres, the fourth system is entirely different, though once more a matching of cards is in some instances involved. Travellers falling under this system complete Embarkation/Disembarkation cards on entering and on leaving the island. It appears that all Jamaicans resident in the island must come under this system of registration. Other types of travellers covered by it include virtually all foreign persons travelling under passports, whether they are entering the island for a short period or for an extended stay. The information contained by these cards as in use in 1953, is shown in the appendix. Unfortunately three questions were removed from the cards in a revision made in 1954, those on marital status, length of stay and mode of travel. However, the question on marital status as framed in the past was not very meaningful, while the immigration authorities still find it necessary to enter the mode of travel of the passenger. The data on which the present study of migration is based are drawn entirely from these cards. Though introduced several years ago, apparently as administrative instruments under the Immigration Restriction (British Subjects) Laws, and the Alien Law of 1945, these cards have so far never been tapped as sources of information on external migration. All tabulations made by immigration authorities have been based on ships manifests. The latter contain only a limited range of data and can therefore yield very little information on the size and characteristics of the several components of the external migration streams.

Selection of Cards and Coding

The determination of the types of Embarkation/Disembarkation cards to be included was dictated by the objects of the study. In view of its specific orientation towards an assessment of the effects of external migration on various aspects of the island's population and economy, it is unnecessary to treat the entire range of external migration. In particular the very large groups of bona fide tourists and transmigrants are wholly irrelevant in the present context. Clearly however, so far as the outward movement is concerned, persons leaving the island permanently are of especial importance, as they constitute definite decrements to the population, and in most cases to its labour force. Similarly in the case of the inward movement persons coming to settle permanently in the island must be given close study, as they comprise definite increments to the island's population, and possibly to its labour force. However to limit the study to permanent migrants would unduly restrict its compass and would in fact not be justified in view of the acknowledged difficulty of distinguishing between temporary and permanent movement on the basis of the declarations made by passengers concerning their purpose of travel.

In order to take full cognisance of all aspects of external migration affecting the permanent population of the island and of other less definite movements which, though not seemingly affecting the population of the island may ultimately do so, as well as of the inward movement of certain types of quasi-migrants which help to complete the picture of the island's external migration, the following types of migration cards were selected for inclusion: *Emigration.* In the outward stream cards were selected of those persons born in Jamaica (whether living in the island or abroad), and of those travellers who though born abroad are permanent residents of the island. These two groups may be conveniently designated nationals and alien residents respectively.

Immigration. In the inward stream the following cards were selected: cards of travellers born in Jamaica (whether living in the island or abroad), of migrants resident in the island though of foreign birth, as well as cards of foreign-born non-residents coming into the island (a) to settle permanently (usually to engage in employment permanently, or to accompany persons immigrating to work) or (b) to seek medical aid or (c) to study. Thus the movements of all nationals and alien residents are covered, as well as those of certain categories of visitors.

The selection of these cards, which was a preliminary process of hand-sorting, meant that certain types of migration cards were excluded. In the first place all departures of bona fide tourists and intransit persons not of Jamaican birth, or of short-term visitors coming to the island on business, medical aid, to study or for any other purpose, were rejected. In the second place all arrivals of bona fide tourists, of short-term visitors of foreign birth and all transmigrants of foreign birth were also excluded.

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The total number of cards selected for the study are shown in Table 2A. Of the 86,000 cards involved most are in respect of departures (56,500), and it is important to note the increase shown by these between 1953 and 1955. Excluded from these is a small number of cards which, though punched, were rejected for one reason or another, especially seamen, repatriates, and cards without passport numbers.

TABLE 2A. NUMBER OF MIGRATION CARDS SELECTED FOR STUDY, 1953-55

Type of Cards	1953	1954	1955	1953-55
Departures	11,469	17,560	27,490	56,519
Arrivals	9,264	9,659	10,549	29,472
Total	20,733	27,219	38,039	85,991

From these specially selected cards the data required for the study were extracted. The several ranges of information obtained from the cards and the codes used in entering them on the code sheets are indicated in the appendix. However, it is essential to discuss briefly at this stage some of the principal schemes adopted and some of their limitations.

The most important of the codes are those signifying type or purpose of travel, seven of which are involved. One of the primary aims of these codes is to distinguish between permanent and temporary external movements. The first code (1) indicates persons leaving the island in order to establish themselves in permanent employment in a place outside their country of normal residence. Two other codes, (6) and (7), also cover permanent migrations, for purposes other than engagement in permanent employment. (In view of the difficulty of distinguishing between these two, however, they are treated as one group). The other codes indicate persons travelling on temporary missions, such as going on holiday, business, to seek medical attention, to study or for other miscellaneous reasons.

In the case of departures from the island coding in these terms presents no difficulties, as the purpose of travel is entered on all the cards. Arrivals however must be treated differently. Cards for non-residents carry the purpose of visit (this is, evidently, rigorously insisted on by the immigration authorities). But for returning residents the usual entry under purpose of visit is "resident" or "returning resident". The procedure of dealing with these in the present study constitutes, as will be shown presently, the introduction of another code.

The system of coding used in this study differs from the system in use by the immigration authorities. Their coding follows broadly modern recommendations.^a As their duties involve especially controlling the movements of aliens into the country, the only coding done is in respect of arrivals. Four codes are used. All tourists and temporary arrivals are coded "V" (visitor). All persons entering the island permanently, whether to seek work or for other reasons are coded "I" (immigrant). A third code, "T" (transmigrant),

^aThe official system in fact is very close to that recommended in the U.N. publication (24), already mentioned.

signifies all persons entering the island temporarily in order to proceed to some other country. A fourth code is "RR" (returning resident), applied to all persons resident in Jamaica who are returning from some temporary voyage. However no use is made of this coding system as a source of statistics; its sole use is evidently in locating and controlling visitors and immigrants.

A few examples will show the differences in coding between the seven-fold scheme of the present study and that of the immigration authorities. Thus under the latter system students coming into the island are coded as visitors, whereas in the present study a separate code is used. Again, whereas under the official system persons coming to seek work and persons coming to settle in the island permanently for some other reason are given the same code "I", these two classes are differentiated in the present study. The only major limitation of the immigration authorities' system, considered as a source of information on changes in the island's labour force, is of course that no coding of departure is used.

Another important set of codes adopted in the present study is that in connection with the occupational classification. The occupational data on the migration cards are subject to several limitations. The occupation is usually indicated by a single word, and there is no means of identifying the industry involved. Some of the descriptions used are vague; terms like "clerk," "civil servant," and "secretary," are not precise enough to permit of fine classifications. Again, it may happen that the entry on the card, even when seemingly adequate, does not represent the occupation being pursued by the migrant at the time of his departure. For though the immigration authorities, in checking entries on the card, pay more attention to nationality, place of birth and of residence, and particulars concerning the passport than to occupation, the fact that such checks are made tends to ensure that the occupation entered on the card is merely that on the passport and not necessarily the one pursued by the traveller at the time of departure or arrival. So where, in the case of departures, the interval between the date of issue of the passport and the date of departure from Jamaica is long the occupational description may be out of date. The most recent evidence however is that the time between the two dates, in the case of resident Jamaicans, is too small for the reliability of the entry on the card to be seriously disturbed.

Despite their limitations, some fairly satisfactory occupational classes can be delineated. The number recognized here is nineteen, while in addition four others are used to represent migrants who, though travelling with the declared intention of engaging in permanent employment, do not describe themselves as pursuing any gainful occupation. The classification used is intended to be simple, but at the same time to make possible some distinction between skilled and semi-skilled classes on the one hand and the unskilled on the other hand. However, the dubious nature of the claims to skill made

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by many of the emigrants from Jamaica must be emphasized, especially as some of them may deem it in their interest to profess such skills in the hope that they may thereby command better positions in the United Kingdom. Throughout this study the occupational classes designated skilled in terms of conventional West Indian standards bear little relation to the classes of skilled workers as understood in Great Britain.

The Matching Scheme

Since much of the value of the present study rests on the reliability of the process used to identify permanent migrants, and since in the planning of the study it was impossible to ascertain whether the coding system designed would assure accurate distinction between the permanent and temporary movements, it was decided to incorporate into the study an approach which, it was considered, would permit adjustments to the first approximations to the dimensions of permanent movements yielded by the coding system. This is essentially a process of matching outgoing against incoming cards, in order to see whether those persons leaving the island returned, and on the other hand whether those entering the island from a foreign country did in fact return to their place of residence. (As will be shown, it proved impracticable to implement the second phase.)

From the standpoint of the present scheme an outward movement from Jamaica comprehends two aspects. In the first place we can treat it as a movement originating in Jamaica, or in other words as one in which a departure from the island constitutes the first leg of a voyage. On the other hand emigration may represent the second leg of a voyage, that is the completion of a voyage which originated with a movement from a foreign country to Jamaica. Thus emigration which is a genuine loss to the island's population represents the first leg of a voyage originating in Jamaica, and so long as it proves to be permanent there is no reason to expect its counterpart to appear in the statistics of arrivals in the form of a return of that particular emigrant. Should however the emigrant, for one reason or another, return to Jamaica despite his declared intention to settle abroad, the first leg of the voyage will have a counterpart; the person will have participated in a complete or two-way movement, which has no permanent effect on the population of the island. If moreover the first leg of a voyage originating in Jamaica represents only a temporary loss to the island, as for instance in the case of persons going on holiday, to seek medical aid or for the performance of some short-time mission, we should expect to find its counterpart in the statistics of arrivals, since the movement is by definition a complete or two-way one.

In a similar way we may consider arrivals as having two aspects. In the first place they constitute the first legs of voyages originating in some foreign country and are genuine additions to the island's population, so long as the persons do not return. They may, alternatively, be the second legs of voyages, that is the completion of movements which began with departures

from the island, and which therefore identify what are merely temporary losses to the population. Consequently if counterparts of supposedly genuine additions to the population turn up in the form of records in the statistics of departures, we have instead complete and by definition, temporary movements; while if there are no counterparts of supposedly temporary losses to the population to be found in the statistics of arrivals, then we have in fact genuine losses to the island's population.

An extension of the foregoing considerations is provided by the movements of residents whose normal occupation entails travelling to places outside Jamaica several times a year, or of foreigners whose duties entail entry into the island more than once a year. Here we should expect to find counterparts of every inward movement in the statistics of departures, and counterparts of every outward movement in the statistics of arrivals, though in some instances one leg of a given voyage may occur in the preceding or in the succeeding period under consideration. Such are the types of travellers usually appearing in the migration records as persons travelling "on business."

If the categories to which travellers can be assigned in terms of the seven-fold coding scheme on the first leg of a voyage are wholly valid — if, for instance, a person proposing to leave Jamaica permanently does not alter his plans and return to his former place of residence — the foregoing concepts can be of no practical importance. But because of changes in the plans of migrants after the first leg of a voyage, inaccuracies in the classifications of types of travellers, and for other reasons, the categories determined from entries in the migration cards do not always furnish an absolutely reliable dichotomy indicative of movements constituting permanent and temporary effects on the population. The utility of the present approach then depends on whether it can lead to any technique which can to some degree correct the errors in such classifications. Inevitably the nature of the problem invites a solution in terms of matching outward against inward movements.

Such a matching technique will enable us to determine when a given voyage, whether its first leg originates in Jamaica or abroad, is complete in the sense that it has no permanent effect on the island's population. It was first planned to use the name of the traveller as a means of identifying each leg of a voyage, the surname and initials being punched on the cards for this purpose. But this proved unsatisfactory, mainly because there are numerous instances of different people of the same surname and initials in the records. The most logical method of identification seems to be the use of passport numbers. There appears to be a very low probability of two persons with British passports issued in Jamaica having the same passport number, as these documents are numbered serially; and Jamaican travellers constitute by far the most numerous of the groups to be dealt with. It also appears that in the case of foreign passports, issued in Jamaica or abroad, there is very little chance of two of these carrying the same number. The use of passport numbers does not however provide a foolproof system; there are

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indeed some difficulties to be faced. In the first place it happens, though fortunately very rarely, that two persons may travel on the same passport. Thus a husband and wife, or a parent and child or even two children may travel on the same passport. Again, while it is rare to find two persons having the same passport number, it does happen that, since persons have from time to time to obtain new passports, some travellers will have different passport numbers for different voyages, or legs of different (or even the same) voyage. Furthermore, due apparently to shortage of passports from time to time and for other reasons, many persons travel on Identity Certificates, which carry another series of numbers. The evidence however is that the foregoing are too rare in occurrence to invalidate a matching procedure.

It is clear that the types of travellers involved and the categories of cards selected for inclusion in the study permit several approaches to the matching problems, and these will be considered in detail later in this study.

Preparation and Processing of Punch Cards

The twenty fields of data yielded by the Embarkation/Disembarkation cards occupy thirty-seven columns of the IBM punch cards, while additional columns have been used to affix serial numbers to the code sheets (each of which contains twenty-five card entries). These numbers serve a dual purpose. They facilitate reference to the original sheets when, in the sorting processes, errors in the punch cards are detected, and they prove convenient means of drawing samples of the punch cards for several tentative runs. A special punching arrangement was made in columns 36 and 37, which were not punched in the case of incoming nationals and alien residents. These constitute the "returning residents" of the immigration authorities' coding system.

In sorting the cards the principal aim was to obtain as much information as possible concerning number, characteristics, seasons of travel of the arrivals and departures during 1953-55. Special attention was paid to permanent migrants entering or leaving the island in search of gainful employment. For instance age-sex occupational patterns for these categories were prepared, but not for other types of travellers. Moreover tabulations by place of birth and parish of residence have been made only for emigrants going to seek work in the United Kingdom, as the examination of the relationship between internal and external migration is of particular relevance only for these types of migrants. Though in general the same basic tabulation schemes have been applied to the incoming and the outgoing cards, a special approach has been adopted in the case of the incoming cards. Here two broad divisions have been made, firstly the residents of the island returning from temporary missions abroad, and secondly the non-residents entering the island on permanent or temporary business. No extensive tabulation is possible for the first division as no information on purpose of visit is available for these.

(II) Study of Sugar Industry Data

The advantage of considering the rates of turnover in industries experiencing depletions to their labour force as a result of emigration is obvious. Clearly if such information corroborated the findings from the study of the migration cards the value of the analysis would be greatly strengthened. It proved, for several reasons, impracticable to carry out such an enquiry on an extended scale. The only information that could be secured as complementary to the basic analysis was that furnished by the sugar industry, one of the few large manufacturing groups in the island with comprehensive records of employment.

The Sugar Manufacturers' Association was approached and asked to assist in collecting from sugar estates data on employment and separations during 1955. With the co-operation of this Association a simple questionnaire was despatched to the several estates and returns were received from 14 estates. These returns, though covering only a small proportion of the island's skilled labour force, do lend appreciable support to the analysis based on the migration cards.

A copy of the questionnaire sent to the sugar industry is given in the appendix. It is simple, seeking only to enquire into the numbers employed at the peak of the operations in 1955 ("in crop") and at the period of least activity ("out of crop"), the total number of separations recorded and the total which, so far as is known, left their employment with the intention of emigrating to the United Kingdom or elsewhere. As will be seen, the enquiry is confined to the sectors of the labour force that are probably in almost permanent employment with these estates. Field workers and casual workers in general are not covered in this questionnaire. An attempt is also made to get some observations of managers on the supply of workers of various classes for the sugar industry in view of the current emigration.

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CHAPTER 3

THE INWARD MOVEMENT

In considering the components of the inward currents of migration the nature of the categories of arrivals selected for the present study should be recalled. In view of the special criteria governing the selection of the components for inclusion, no significance can be attached to the totals of these components. Two broad groups of arrivals may be distinguished. The first covers residents of the island, whether born in Jamaica or abroad, that is nationals as well as alien residents who left the island on holiday or some other temporary mission and who are now returning to resume permanent residence. The present scheme of coding does not make it possible to classify these returning residents by type or purpose of travel, but manifestly the totals of these arrivals are of some importance, as they should give a first approximation of the extent of external migration of a temporary nature in which the total population is involved. Arrivals of this kind are considered "returning residents" by the immigration authorities. The second broad group covers persons normally resident abroad (including some born in Jamaica) who are entering the island either to assume permanent residence or for some temporary business of a nature already indicated. As some of these persons entering the island complete genuine tourist cards (blue) and not the Embarkation/Disembarkation cards dealt with in this study, not all the migrants falling into this category are covered here. The proportion lost because of this is believed to be substantial, as will be shown presently. The precise purpose of travel of these migrants can of course be easily ascertained, though in the present study it is of only minor significance. As all residents of foreign countries are not entering the island for permanent residence, this broad dichotomy gives no precise information on temporary and permanent increments to the population in general or to its working force in particular. All immigrants coming to engage in permanent employment as well as others coming to join relatives permanently or to live in retirement in the island, constitute permanent additions to the population. On the other hand none of the arrivals falling into the broad category of residents can be treated as permanent increments to the population. Arrivals of this type are no more than the second legs of voyages, the first of which implied departures on holiday, business or some other temporary mission.

Arrivals of Jamaican Residents

The arrivals of Jamaican residents provide one aspect of the pattern of external migration affecting the island, as they show the numbers of nationals and alien residents involved in temporary movements, and the countries to which such movements are made. A summary of these data appears in

Table 3A. During the three years 1953-55 the average number of male arrivals was 3,300 while the corresponding number of females was 3,100. Thus on the average about four persons per 1,000 of the population were during these years involved in external migration of a temporary nature. The countries in which these arrivals originated are of importance though they do not necessarily indicate that the persons spent all their time abroad in the country declared on the migration card. These entries may represent no more than one link along a chain of travel in which the travellers engaged. It is of interest that the major power nearest to the island, the United States, is the country to which Jamaica is most closely tied by travel links. However, since some people returning to the island from Europe travel via the United States, the latter may in the present context be over-represented. Over 1,300 males and about 1,800 females on the average returned to the island from the United States during 1953-55; movements from this country thus accounted for 39 per cent of the foreign travel of a temporary nature in the case of males, and 57 per cent in the case of females. The second most important area is Latin America, from which 19 per cent of the males and 11 per cent of the females came. Travel links with the United Kingdom are also appreciable, as about 16 per cent of the arrivals of Jamaican residents originate in this area. As many persons returning from Europe travel via the United States, the travel links with the United Kingdom are doubtless understated by current migration data. Also noteworthy are the links with the British West Indies, which in the case of the males account for 13 per cent of all arrivals, though in the case of the females the proportion is much lower (5 per cent).

TABLE 3A. ARRIVALS OF RESIDENTS OF JAMAICA, 1953-55

Country of Departure	Male Arrivals				Female Arrivals			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	516	472	564	1,552	464	483	538	1,485
United States	1,107	1,271	1,560	3,938	1,475	1,988	1,879	5,342
Canada	99	87	100	286	123	107	132	362
Brit. W.I.	431	396	433	1,260	161	154	177	492
Latin America	569	662	699	1,930	333	350	392	1,075
Dependencies	194	119	128	441	88	83	89	260
Elsewhere	211	184	191	586	144	133	107	384
Total	3,127	3,191	3,675	9,993	2,788	3,298	3,314	9,400

The seasonal pattern of arrivals of Jamaican residents indicates very clearly that most temporary migrants returned to the island during the months of August to November. The numbers returning in January and February are comparatively small, while the largest number of arrivals of this kind usually occur in the months of September to October. In general the number of arrivals during the second half of the year greatly exceeds the arrivals during the first half. It thus seems that most people going abroad plan their travel so that they will be able to return to the island before the winter season,

Arrivals of Foreign Residents

Though in the present context little significance can be attached to the total arrivals of foreign residents, the relative importance of the several components subsumed under this broad category remains of interest, and a summary of arrivals in these terms appears in Table 3B. Each sex shows a distinctive pattern. Among the males the largest component is the group coming to seek work, which on the average accounts for 37 per cent of the total. Between 500 and 600 males enter the island annually as permanent additions to the island's working force. Second in numerical importance are those who come to study; these average just under 400 per year and constitute about one quarter of the total. It must however be emphasized that as many foreign students return to their native land once or twice each year, the actual number of students involved is less than the number of arrivals suggests. In this study arrivals on holiday and business are restricted to persons born in Jamaica but now resident abroad, and in effect merely reflect the extent to which Jamaican-born persons now living abroad renew their association with the island temporarily. Males returning on holiday average about 350 a year and account for 22 per cent of all arrivals dealt with here. However the numbers coming on business are negligible, being only 3 per cent of the total. Some portion of the other types, which account for 10 per cent of all these arrivals, also constitute permanent returns to the island, as will be shown at a later stage.

TABLE 3B. ARRIVALS OF ALL RESIDENTS OF FOREIGN COUNTRIES, 1953-55

Types or Purposes of Travel	Male Arrivals				Female Arrivals			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
To Seek Work	590	500	643	1,733	244	218	217	679
To Study	378	397	403	1,178	348	379	496	1,223
To Seek Medical Aid	68	27	49	144	132	80	104	316
On Holiday	363	344	345	1,052	583	553	574	1,710
On Business	60	49	48	157	14	6	16	36
Other Types	133	155	178	466	436	462	487	1,385
Total	1,592	1,472	1,666	4,730	1,757	1,698	1,894	5,349

The average annual number of arrivals of female residents of foreign countries (1,800) is slightly more than the average number of male arrivals, (1,600), and the pattern, in terms of categories of migrants, markedly different. In contrast to the position of the males, travel in respect of holiday is by far the most important, accounting for nearly one third of all female arrivals. Second in importance are the other types, which account for 26 per cent of the total. In numbers female student arrivals (1,220 during the three-year period) exceed the corresponding number for the males, though the proportion of the total involved is about the same for each sex, approximately 24 per cent. Arrivals representing additions to the working force are small, averaging 230 per year or less than half the number in the case of the males, and a figure equivalent to only 13 per cent of the total female arrivals.

Probably the most important group of arrivals is that consisting of permanent additions to the island's population. Permanent immigration is here determined solely on the basis of the declaration on the migration cards. Thus all persons entering the island with the stated intention of engaging in gainful employment for a period in excess of six months are treated as permanent additions to the population. The second category which in the present context gives rise to permanent additions to the population is the residual one denoting other types of travel. This is comprised not only of persons declaring that they are entering for permanent residence, but also of a small number of Jamaican-born persons resident abroad who, on arrival, declare that they are entering the island for miscellaneous reasons. It is thus taken here that permanent immigrants will not be found among the categories covering arrivals of foreign-born persons to study, or to seek medical attention; these quasi-migrants are in fact introduced into the study solely in order to supplement the other types of data. Implicit also is another assumption: that Jamaican-born persons resident abroad and entering the island for holiday or business are wholly composed of temporary additions to the population.

Permanent immigrants, by sex and age, are shown in Table 3C. More than half of these, 1,910 of a total of 3,490, are males. Among the latter immigrants for gainful employment are overwhelmingly the more important of the two elements of permanent immigration distinguished here, accounting for 1,730 or 91 per cent of all male immigrants during 1953-55. In the case of the females immigration is clearly less heavily dominated by persons coming for permanent employment. Many of the females coming to reside in the island are the wives of males coming to fill permanent positions. Others are coming to live permanently in Jamaica for other reasons. Indeed only 43 per cent of all female immigration during 1953-55 consisted of persons coming to work. It thus follows that while males constitute by far the greater proportion of the immigrants coming for employment (72 per cent of the total) they are much less important among permanent immigrants of other types; here they constitute only 16 per cent of the total. The average ages of these permanent immigrants are in general higher than the corresponding ages for permanent emigrants. Among the males entering to work it ranges from 37 to 38, and among the females entering for the same purpose from 35 to 38 years. As permanent immigrants entering the island for other purposes include children they show much lower average ages. Males show an average age of just over 23 years, while the females show an average of about 22 years for 1953 and 1955 and of 27 for 1954.

It remains of interest to examine the relative importance of the several types of movements of foreign arrivals from the seven broad geographical areas distinguished over the three-year period. This is summarized in Table 3D. Among the males 560 or 77 per cent of the arrivals from the United Kingdom represent persons coming to engage in permanent employment, while

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TABLE 3C. PERMANENT IMMIGRANTS, BY SEX AND AGE, 1953-55

Age Group	For Employment			For Other Reasons			Total 1953-55		
	1953	1954	1955	1953	1954	1955	For Employment	For Other Reasons	Total
Male									
Under 10	—	—	—	—	2	2	—	4	4
10-14	—	—	—	3	4	5	—	12	12
15-19	13	10	4	7	5	9	27	21	48
20-24	54	73	34	25	32	39	161	96	257
25-29	126	91	123	3	5	9	340	17	357
30-34	115	90	135	1	3	5	340	9	349
35-39	75	65	110	1	2	7	250	10	260
40-44	81	63	95	3	4	—	239	7	246
45-49	42	40	63	—	—	—	145	—	145
50-54	29	27	32	—	—	—	88	—	88
55-59	24	15	17	—	—	—	56	—	56
60-64	14	10	15	—	—	—	39	—	39
65+	17	16	15	—	—	—	48	—	48
Total Male	590	500	643	43	57	76	1,733	176	1,909
Female									
Under 10	—	—	—	12	2	14	—	28	28
10-14	—	—	—	5	6	11	—	22	22
15-19	10	11	5	44	14	48	26	106	132
20-24	32	33	23	239	77	283	88	599	687
25-29	55	44	37	10	17	15	136	42	178
30-34	31	30	49	9	17	9	110	35	145
35-39	19	30	35	2	12	3	84	17	101
40-44	25	26	15	9	29	10	66	48	114
45-49	17	11	19	—	—	—	47	—	47
50-54	15	18	7	—	—	—	40	—	40
55-59	17	9	9	—	—	—	35	—	35
60-64	8	2	9	—	—	—	19	—	19
65+	15	4	9	—	—	—	28	—	28
Total Female	244	218	217	330	174	393	679	897	1,576
Total Both Sexes	834	718	860	373	231	469	2,412	1,073	3,485

9 per cent represent arrivals of persons coming on holiday. Male arrivals from the United States again show that engagement in work constitutes the most prominent category; nearly 580 males came from the United States for permanent employment, equivalent to 38 per cent of all arrivals from this country. Another important type of immigrant covers those coming on holiday, who comprise 34 per cent of the total. Likewise in the case of arrivals from Canada entry into the island's working force was of major importance, 190 or 63 per cent of the total coming for this purpose. Of male arrivals from the British West Indies, students comprise the largest category, 410 or 53 per cent of the total, though an appreciable proportion (22 per cent) also came for employment. Similarly students are the most numerous of the arrivals from Latin America, involving 550 or 53 per cent of the total during the three-year period, though arrivals on holiday (23 per cent) are also im-

portant. Though not much movement takes place between the Dependencies and Jamaica, it is of interest that of the arrivals recorded those seeking medical aid and students, 37 per cent and 27 per cent respectively, are the largest types.

TABLE 3D. ARRIVALS OF ALL RESIDENTS OF FOREIGN COUNTRIES, BY COUNTRY OF ORIGIN AND PURPOSE OF TRAVEL, 1953-55

Country of Origin		Purpose of Travel					
		Employment	Study	Medical Aid	Holiday	Business	Other
Male							
United Kingdom	558	18	22	68	10	51	727
United States	576	98	17	508	73	245	1,517
Canada	192	7	2	86	8	9	304
British West Indies	171	408	10	95	33	46	763
Latin America	144	554	15	243	24	74	1,054
Dependencies	20	50	70	23	3	23	189
Elsewhere	72	43	8	29	6	18	176
Total Male	1,733	1,178	144	1,052	157	466	4,730
Female							
United Kingdom	198	12	7	96	1	595	909
United States	284	65	19	956	21	455	1,800
Canada	43	2	2	93	2	72	214
British West Indies	59	232	22	76	1	121	511
Latin America	53	841	7	412	5	77	1,395
Dependencies	19	41	255	25	5	22	367
Elsewhere	23	30	4	52	1	43	153
Total Female	679	1,223	316	1,710	36	1,385	5,349
Total Both Sexes	2,412	2,401	460	2,762	193	1,851	10,079

Somewhat different are the patterns revealed by the several types of female arrivals from the seven geographical areas dealt with. Of those coming from the United Kingdom, the majority (600) or 66 per cent of the total give some indefinite reason for doing so, while only about 200 or 22 per cent declare their intention of engaging in permanent employment. As has already been emphasized, most of the arrivals from the United States are on holiday (53 per cent), though once more a variety of indefinite reasons account for one quarter of female travel. The same pattern appears in the movements from Canada, 44 per cent of the arrivals being on holiday and 34 per cent for other reasons. Most of the arrivals from the British West Indies are in the case of the females largely students (45 per cent). Of those coming from Latin America students and persons on vacation are the largest groups, accounting for 60 per cent and 30 per cent respectively of the total. As among the males, arrivals from the Dependencies are mostly people coming to seek medical aid (70 per cent).

Persons arriving to enter the island's working force comprise the most significant component of immigration, in the context of the present study, and these are summarized in Table 3E. Though the overall numbers are small, averaging 570 males and 230 females, the composition emphasizes that immigration provides notable increments to certain sectors of the island's lab-

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our force. We consider first the occupational pattern of male immigrants. By far the most numerous of the arrivals are the professional group, arrivals in this class amounting to 190 in 1953, 180 in 1954 and 210 in 1955. Professionals in fact comprise one third of the increments to the working force from immigration during 1953-55. Managers and senior executives in business and industry also enter the island in appreciable numbers; about 200 entered the island during 1953-55, equivalent to 12 per cent of the total male arrivals for permanent employment. If we consider the major occupational divisions of the immigrants it appears that professionals, managers and workers of a somewhat advanced status comprise by far the most important increments; actually 63 per cent of total arrivals for employment fall into these types. Skilled workers also enter the island in small numbers (about 100 a year) accounting for 18 per cent of all arrivals for gainful employment. Of importance is the fact that many persons coming into the island for gainful employment are, at least according to their own declarations, outside the ranks of the gainfully employed at the time of their entry into the island. Thus students and retired persons account for 2 per cent of all arrivals for

TABLE 3E. ARRIVALS FOR PERMANENT EMPLOYMENT, BY SEX AND OCCUPATION, 1953-55

Occupational Class	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
01 Planters	5	9	3	17	1	—	—	1
02 Farm Workers	2	—	2	4	—	—	—	—
03 Carpenters	7	3	12	22	—	—	—	—
04 Masons	4	—	2	6	—	—	—	—
05 Mechanics etc.	64	30	90	184	—	2	—	2
06 Other Skilled Workers	38	38	60	136	2	2	6	10
07 Unskilled Workers	5	9	9	23	—	—	1	1
08 Clerks etc.	33	24	11	68	17	25	23	65
09 Senior Persons in Trade	44	35	46	125	2	2	2	6
10 Executives and Managers	76	64	64	204	3	4	2	9
11 Domestic Workers	9	8	10	27	26	7	14	47
12 Personal Service Employees	6	1	1	8	2	1	3	6
13 Tailors and Dressmakers	—	1	3	4	6	7	7	20
14 Nurses	—	—	—	—	13	18	10	41
15 Teachers	9	15	18	42	25	24	20	69
16 Civil Servants	11	9	8	28	—	1	2	3
17 Professionals	188	178	212	578	20	13	16	49
18 Others	58	53	66	177	36	40	32	108
19 No occupation Given	10	12	12	34	10	9	6	25
20 Housewives	—	—	—	—	67	53	70	190
21 Students	12	5	5	22	6	6	2	14
23 Others not Employed	9	6	9	24	8	4	1	13
Total	590	500	643	1,733	244	218	217	679

Note: Complete descriptions of the occupational codes are given in an appendix.

gainful employment. As will be seen in Chapter 4, the emigrants from the island comprise mostly skilled and unskilled elements of the working classes; these occupational classes are not strongly represented in the stream of immigration, which involves mainly additions to higher grade personnel.

The occupational pattern of the females coming to enter the labour force differs from that of the males mainly because many of the former, instead of giving their occupations, enter themselves only as housewives, a term which, though accepted by the migration authorities, does not necessarily prove that a woman was not in some gainful occupation before her arrival in the island. The broad class of females describing themselves as outside of the labour force amounts to 70 per year, equivalent to nearly one third of all females entering the island for permanent employment. Of those females who declare their occupation, those falling within the miscellaneous group of higher personnel (code 18) account for the largest proportion (16 per cent), while next in importance come teachers (10 per cent) and secretarial and similar clerical workers (10 per cent). The proportion of professional workers (7 per cent) is much lower than in the case of the males. As in the case of the males, therefore, the occupational pattern of female additions to the island's labour force from abroad differs markedly from the pattern of female emigration.

Because of the preponderance of professional and similar higher-paid personnel in the occupational distribution of the permanent immigrants, we should expect the average ages among these occupational types to be comparatively high, at least to exceed those of the permanent emigrants from the island, who comprise for the most part, occupational types much less highly placed.

Average ages for some of the chief occupational classes entering the island appear in Table 3F. The average age of the males entering the island for permanent employment was 37.0 years in 1953, 36.5 in 1954 and 37.9 in 1955, all of which are appreciably higher than the corresponding ages for the males emigrating. Thus the ages of professional males entering the island range from 36.6 to 37.6 while that for executives and other highly placed persons in commerce and industry range from 37.4 to 39.6. Apart from the small numbers of students coming to augment the working force and the small numbers of secretaries and clerical workers, most of the occupational categories among these immigrants show average ages well in excess of 33.

By comparison with the permanent emigrants the females arriving for gainful employment also exhibit comparatively high average ages. The average for all permanent female arrivals was 38.0 years in 1953, 35.4 in 1954 and 37.4 in 1955. As we have already noted, the largest type of females is the indefinite one subsumed under housewives; here also the average ages are high, ranging from 38.8 to 36.6 years. The group (code 18) covering the miscellaneous collection of comparatively high grade workers also shows a high average age, 37.2 years in 1953, 40.9 in 1954 and 38.9 in 1955.

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TABLE 3F. AVERAGE AGES OF SOME OCCUPATIONAL CLASSES OF PERMANENT ARRIVALS FOR EMPLOYMENT, BY SEX, 1953-55

Occupational Class	Male			Female		
	1953	1954	1955	1953	1954	1955
03 Carpenters	43.9	54.2	38.8	—	—	—
05 Mechanics, etc.	34.3	32.3	34.4	—	—	—
08 Clerks, etc.	33.1	29.8	28.5	29.9	27.9	32.3
09 Senior Persons in Trade	34.5	34.5	37.3	45.0	37.5	30.0
10 Executives and Managers	37.5	37.4	39.6	34.2	33.7	47.5
15 Teachers	39.7	31.2	34.2	35.5	33.7	36.0
17 Professionals	36.8	36.6	37.6	33.8	31.3	32.2
18 Others	39.0	40.2	42.1	37.2	40.9	38.9
20 Housewives	—	—	—	38.8	36.6	38.8
21 Students	21.3	20.5	22.1	20.0	19.1	21.5
Total	37.0	36.5	37.9	38.0	35.4	37.4

Just as important as the occupational distribution of the persons arriving to join the island's working force are the countries from which they come. These are given in Table 3G. From the predominance of professional and higher placed personnel in general among the immigrants it would be expected that most of the males would come from highly industrialized countries, and this in fact appears. Thus 77 per cent come from the United Kingdom, United States and Canada. It would seem that the numbers coming from the United States tend to increase from 1953 to 1955, whereas those coming from the United Kingdom tend to decline. Increments from the British West Indies account for 10 per cent of all male immigrants, while 8 per cent are from Latin America. The very small numbers from the Dependencies (1 per cent) is to be noted, as it emphasizes that there is no large shift of population from these areas to the parent territory.

TABLE 3G. ARRIVALS FOR PERMANENT EMPLOYMENT, BY SEX AND COUNTRY OF ORIGIN, 1953-55

Country of Origin	Male Arrivals				Female Arrivals			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	223	142	183	558	75	69	54	198
United States	152	198	226	576	97	87	100	284
Canada	64	27	101	192	15	10	18	43
British West Indies	53	52	66	171	21	22	16	59
Latin America	52	46	46	144	17	17	19	53
Dependencies	7	5	8	20	11	5	3	19
Elsewhere	29	30	13	72	8	8	7	23
Total	590	500	643	1,733	244	218	217	679

Females repeat the pattern of country of origin shown by the males. Most of them come from the United Kingdom, United States, and Canada, which together supply 77 per cent of the total. Again there is a suggestion that numbers coming from the United Kingdom decline somewhat between 1953 and 1955 whereas numbers coming from the United States tend to rise. However in contrast to the situation among the males, more of the females (42 per cent) come from the United States. Once more the negligible numbers of workers drawn from the dependencies is in evidence; the proportion (3

per cent) emphasizes the absence of any notable shift of population from these islands to Jamaica.

In this study arrivals on holiday include only persons born in Jamaica and resident abroad, and these are shown in Table 3H. The numbers of these are very small and their significance lies mainly in the fact that they indicate the extent to which persons who emigrated from Jamaica in the past return to renew ties with their relatives and friends in their place of birth. As some of these immigrants complete genuine tourist cards on arrival, not all of them will be covered in the present tabulations. Manifestly it is from areas which in the past absorbed the majority of emigrants from Jamaica that we should expect most of these persons to come. Indeed as most of the emigration in the past was to Latin American areas and the United States, it is from these two that most of the small number of arrivals of persons coming on holiday originate. Of the males 48 per cent come from the United States and 23 per cent from Latin America. Of the females 56 per cent come from the United States and 24 per cent from Latin America. The negligible proportion arriving from other areas emphasizes that none of these areas attracted large numbers of Jamaicans in the past.

TABLE 3H. ARRIVALS ON HOLIDAY, BY SEX AND COUNTRY OF DEPARTURE, OF JAMAICAN-BORN PERSONS RESIDENT ABROAD, 1953-55

Country of Departure	Male Arrivals				Female Arrivals			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	24	14	30	68	27	36	33	96
United States	140	201	167	508	297	325	334	956
Canada	33	30	23	86	31	36	26	93
Brit. W. I.	36	31	28	95	29	21	26	76
Latin America	105	59	79	243	161	118	133	412
Dependencies	12	—	11	23	14	4	7	25
Elsewhere	13	9	7	29	24	13	15	52
Total	363	344	345	1,052	583	553	574	1,710

The indications are that two seasonal features dominate these arrivals on holiday. The most arresting is that each year shows a very high concentration of arrivals in the month of December. For both males and females about 22 per cent of the total arrivals occur in this month. But there is also evidence of a fairly high rate of arrivals during the months of May to August, the proportion in July being second only to that of December.

Students entering Jamaica average about 800 per year. These consist for the most part of students from British West Indian territories coming to the University College of the West Indies, students from Venezuela, the Dominican Republic and other Latin American countries coming to attend school, secondary, commercial, or otherwise, and in particular to learn English. It is of interest that the great majority of these come from Latin American countries, the average number of arrivals from these areas (460) representing more than half the total, as can be seen from the summary of Table 3I. (The actual number of students may be somewhat lower than the number of arrivals,

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since there are students who return to their native land at the end of each school term). Students also arrive from the British West Indian territories, mostly to attend the University College of the West Indies; from these come 35 per cent of all male student arrivals and 19 per cent of all female arrivals. But from other countries only negligible numbers are involved. As is to be expected, these arrivals tend to concentrate in certain fixed periods of the year, corresponding to the dates of commencement of the school and university term. Thus 33 per cent of male arrivals and 38 per cent of female arrivals occur in the month of September, while 21 per cent of the male and 27 per cent of the female arrivals occur in January.

TABLE 3I. ARRIVALS TO STUDY BY SEX AND COUNTRY OF ORIGIN, 1953-55

Country of Origin	Male Arrivals				Female Arrivals			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	6	6	6	18	3	8	1	12
United States	27	34	37	98	12	18	35	65
Canada	1	4	2	7	—	—	2	2
Brit. W. I.	119	148	141	408	67	75	90	232
Latin America	192	174	188	554	244	259	338	841
Dependencies	20	18	12	50	13	11	17	41
Elsewhere	13	13	17	43	9	8	13	30
Total	378	397	403	1,178	348	379	496	1,223

Arrivals of Dependents

Not all the permanent arrivals into the island travel on their own passports; many children accompanying their parents or guardians do not have their own travel documents but are listed on the passports of the adults with whom they travel. Such children, usually under 15 years of age, are considered by the immigration authorities as dependents and are listed on the migration card of the adult, but the only characteristic of these children indicated is their age. For the purpose of the present tabulation it is assumed that all dependents accompanying adults who are entering the island with the declared intention of living in the island permanently are themselves permanent immigrants. These are of course only part of the total number of dependents entering the island, as many who travel on their own are included in Table 3C.

The numbers of dependents coming into the island under the care of adults are shown in Table 3J. They are small and show no great change over the three-year period, being 300 in 1953, 330 in 1954 and 280 in 1955. Most of these children travel under the care of female adults. Thus over the three-year period only about 90 of the total of 910 dependents came under the immediate care of males. In regard to the country of origin of the dependents, most of them come from the United Kingdom (540 or 60 per cent of the total) while 150 or 16 per cent come from the United States. The great majority of these dependents are under 10 years of age; the proportions being 89 per cent in 1953, 88 per cent in 1954 and 87 per cent in 1955. The small number aged 10-14 is evidently due to the fact that most children of this age

travel on their own passport. At the same time it is also possible that persons coming into the island for permanent residence may be unwilling to remove their older children, those aged 10-14, from school, though quite prepared to travel with their younger children. The purpose of travel is not applicable to dependents, but it is of interest to note that only small numbers of the adults accompanying them are entering the island for employment. In 1953 and 1955 24 per cent of the adults arriving with dependents came for employment: in 1954 the proportion was 17 per cent.

TABLE 3J. ARRIVALS OF DEPENDENTS FROM VARIOUS COUNTRIES, 1953-55

Year	United Kingdom	United States	Canada	Elsewhere	Total
Travelling with Male Adults					
1953	24	11	2	6	43
1954	12	7	2	—	21
1955	7	15	—	6	28
1953-55	43	33	4	12	92
Travelling with Female Adults					
1953	151	37	10	61	259
1954	210	31	17	47	305
1955	138	45	24	43	250
1953-55	499	113	51	151	814
Travelling with Adults of Both Sexes					
1953-55	542	146	55	163	906

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CHAPTER 4

THE OUTWARD MOVEMENT

(1) *Emigration in General*

Departures as constituted in this study can be treated, as was done in the case of arrivals, as falling into two categories, those referring to residents of the island and those referring to persons normally resident abroad. The former comprise by far the more numerous and important. In the case of the males they account, on the average, for 95 per cent of all departures, while in the case of the females 91 per cent of all departures are residents of the island. Thus the extent to which emigration, whether temporary or permanent, affects the population can be estimated on the basis of these departures. The rate of emigration per 1,000 of the population rose from 7.7 in 1953 to 11.6 in 1954 and to 17.8 in 1955. The second and smaller sector of the departures refers to persons born in Jamaica and resident abroad, and in effect traces their return home. These movements, the counterparts of which appear in the data on arrivals, merely indicate the extent to which Jamaican-born persons resident abroad renew their ties with their native land. A summary of departures by type or purpose of travel appears in Table 4A.

TABLE 4A. TOTAL DEPARTURES, BY SEX AND TYPE OR PURPOSE OF TRAVEL, 1953-55

Type or Purpose of Travel	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
To Seek Work	2,098	6,041	11,611	19,750	1,494	3,498	6,847	11,839
To Study	406	404	515	1,325	452	531	725	1,708
To Seek Medical Aid	25	25	29	79	41	36	35	112
On Holiday	1,208	1,185	1,421	3,814	2,538	2,316	2,445	7,299
To Return Home	442	483	505	1,430	717	715	737	2,169
On Business	962	961	1,162	3,085	131	106	90	327
Other Reasons	510	675	679	1,864	445	584	689	1,718
Total	5,651	9,774	15,922	31,347	5,818	7,786	11,568	25,172

Departures from the island can be viewed from another standpoint and another dichotomy invoked, one between temporary and permanent external migration. Departures of a temporary nature comprise persons travelling on holiday, business, to study, to seek medical attention or for other purposes. During the three-year period the average number of males falling into these categories amount to nearly 3,400, while the corresponding females amount to 3,700. These are in fact the obverse of the arrivals of Jamaican residents, and the two should be in close agreement. In the case of males there is in fact a fairly close agreement, as the average number of male arrivals amounts to 3,300. The agreement in the case of the females is however less satisfactory, for the corresponding average arrivals is much less

Total

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(3,100). The suggestion therefore is that the purpose of travel set down by females is much less reliable than the corresponding information given by males. Further consideration of these agreements will be taken up when the broader problem of collating the outward and inward streams of migration is discussed. Permanent departures for the most part consist of persons emigrating in search of employment and special consideration of these movements will be made in this study.

The most striking feature of the overall pattern of departures affecting residents of the island is the increase noted between 1953 and 1955. Within the span of three years departures of males rose from 5,650 to 15,920, almost a threefold increase; female departures rose from 5,820 to 11,570, that is nearly doubling over the same period. This development is overwhelmingly due to the great increase in the numbers emigrating in search of work. Males emigrating to seek work numbered 2,100 in 1953, 6,040 in 1954 and 11,610 in 1955. Likewise females emigrating to seek work increased rapidly from 1,490 in 1953 to 3,500 in 1954 and to 6,850 in 1955. The proportion of departures in search of work rose markedly. In 1953 less than half the males and about one quarter of the females leaving the island went to seek work; by 1955 73 per cent of the male and 59 per cent of the female departures were accounted for by persons going in search of work.

In strong contrast to departures in search of employment, none of the other types dealt with here shows any marked increase over the period. The second largest category, departures on holiday, ranges from 1,200 to 1,400 in the case of the males and are about twice as numerous in the case of the females. Over the whole three-year period, about 12 per cent of male and 29 per cent of female departures are accounted for by persons leaving the island on holiday. The third largest category of departures covers Jamaican-born persons resident abroad, who entered the island for some temporary purpose and are now returning to their normal place of residence. These number between 400 and 500 per year in the case of the males and just over 700 in the case of the females. As is to be expected, departures on business are largely male. Male departures in this category range from 960 to 1,160, but only about 100 female departures are recorded annually. The number of departures is not of course a true indication of the number of persons involved, since the evidence is that those persons whose work normally takes them out of the island usually travel more than once a year. The pursuit of study of various kinds also constitutes a strong motive for travel; 4 per cent of male travel and 7 per cent of female travel come within this category. The numbers involved have increased, though by no means at the same rate as departures in search of work. Males leaving the island to study increased from 410 in 1953 to 520 in 1955, whereas females increased from 450 to 730 over the same period. Very small numbers leave the island in search of medical attention, less than 100 of both sexes annually. About 6 per cent of all persons travelling gave other reasons, and those also show some small increase between 1953 and 1955.

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In view of the multiplicity of purposes of travel, the totals of departures may not be expected to show any marked seasonal patterns. Still it is evident that on the whole comparatively little travel is done between January and April, whereas the months of July to October witness a considerable activity in travel of all types.

Departures in Search of Employment

This being the major category of outward migration, special importance attaches to the nature of its growth, which, we have already seen, dominates the entire picture of emigration during 1953-55. During the three-year period about 31,600 persons left the island with the declared intention of seeking employment abroad. As is seen from Table 4B., the movement to the United Kingdom is overwhelmingly the most important, and its detailed treatment will be taken up later. The relatively stable numbers involved in the movement to other countries must, however, be noted. Evidently appreciable numbers still succeed in entering the United States in search of work, though probably few of these are entering for permanent residence. Between 500 and 600 males and somewhat in excess of 300 females a year emigrate with the declared intention of working in the United States. Small numbers also leave for Canada in search of work. Departures to the Dependencies of Jamaica are small and emphasize what all available migration data show, that there is very little inter-change of population between the two areas. Permanent movements to Latin America, the British West Indies and to other areas are small, involving the emigration of less than 300 persons of both sexes each year.

TABLE 4B. DEPARTURES TO SEEK PERMANENT EMPLOYMENT, BY SEX AND ULTIMATE DESTINATION, 1953-55

Ultimate Destination	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	1,284	5,178	10,911	17,373	875	2,861	6,144	9,880
United States	503	614	484	1,601	329	373	388	1,090
Canada	101	79	77	257	101	121	179	401
Brit. W. I.	52	51	42	145	46	33	32	111
Latin America	55	54	28	137	97	68	55	220
Dependencies	80	38	25	143	30	15	28	73
Elsewhere	23	27	44	94	16	27	21	64
Total	2,098	6,041	11,611	19,750	1,494	3,498	6,847	11,839

There is little reason to expect a seasonal pattern in permanent emigration, but this is in fact evident. In general the majority of departures occur during the three months August to October. During this period 39 per cent of male and 36 per cent of female departures take place. January is the least favoured month of departure and October the most so. The evidence is that the movement to the United Kingdom, which dominates this category of migration, is mostly timed to allow the migrant to reach his destination well before the worst winter months or after winter.

Departures on Holiday

Departures on holiday, summarized in Table 4C., in contrast to departures in search of work, show very little overall changes between 1953 and 1955. The most important feature is the strong preference for the United States by residents going abroad on holiday. Of the males 46 per cent choose the United States while the proportion in the case of the females is much higher, 63 per cent. On the average just under 600 males and about 1,500 females travel to the United States on holiday each year. Second in importance as a place to spend a holiday is the United Kingdom, about 250 males and 350 females going there each year. Thus about 20 per cent of the male and 15 per cent of the female departures on holiday are to the United Kingdom. As 16 per cent of the male holiday departures and 10 per cent of the female are to Latin American countries, it seems that some links between Jamaica and these countries exist, probably due as much to the proximity of these areas as to their close ties with Jamaica established during the period of emigration prior to 1921. Small numbers also spend their holidays in Canada, the British West Indies and other places, but once more the lack of any marked ties with the dependencies is evident as less than 100 people of both sexes holiday there each year.

TABLE 4C. DEPARTURES ON HOLIDAY BY SEX, AND ULTIMATE DESTINATION, 1953-55

Ultimate Destination	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	237	246	269	752	323	361	379	1,063
United States	586	538	644	1,768	1,718	1,460	1,401	4,579
Canada	65	60	82	207	109	99	135	343
Brit. W. I.	81	62	76	219	62	69	110	241
Latin America	161	196	239	596	227	208	263	698
Dependencies	38	28	43	109	43	45	68	156
Elsewhere	40	55	68	163	56	74	89	219
Total	1,208	1,185	1,421	3,814	2,538	2,316	2,445	7,299

A marked seasonal pattern of holiday travel is in evidence. Comparatively little travel is done in the months of January and February. A seasonal index for the three-year period shows that the values for these months range from 31 per cent to 44 per cent. Holiday travel gets under way in the month of April and continues to increase, reaching a maximum in the month of July when the index stands at 201 for the males and 174 for the females. In summary it can be said that holiday travel is largely confined to six months of the year, from April to September, and during this period 74 per cent of the female departures and 73 per cent of the male departures take place. On the other hand only minor travel of this nature is in evidence during the winter months.

Departures to Return Home

This category covers Jamaican-born persons who, normally resident abroad, come to the island and are now leaving to return home. It is clearly an omni-

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bus category, since many motives may be behind these voyages. The interest in movements of this nature lies largely in the information they convey concerning the areas in which emigrants from Jamaica settled in the past. As is well known, emigration from Jamaica in the past was mainly to the United States and Latin American countries, and Table 4D, emphasizes this, as the majority of persons are returning to the United States and Latin American areas. Of the males 48 per cent are returning to the United States and 24 per cent to Latin America, while of the females 59 per cent are returning to the United States and 21 per cent to Latin America. Others returned to Canada, the British West Indies and other areas but the numbers involved are very small.

TABLE 4D. DEPARTURES TO RETURN HOME, BY SEX AND ULTIMATE DESTINATION, 1953-55

Ultimate Destination	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	15	23	22	60	41	34	30	105
United States	209	235	241	685	411	434	434	1,279
Canada	43	55	45	143	30	53	52	135
Brit. W.I.	31	49	44	124	31	32	35	98
Latin America	114	99	124	337	170	141	152	463
Dependencies	13	7	16	36	13	5	18	36
Elsewhere	17	15	13	45	21	16	16	53
Total	442	483	505	1,430	717	715	737	2,169

Seasonal features are less clearly defined in departures of this category. But, in keeping with the several other categories of departure dealt with here, the months of July to September are periods of most activity. For instance 30 per cent of male and female departures occur within these three months, but the seasonal pattern is not very clearly defined.

Departures on Business

Movements of this type are overwhelmingly undertaken by males; in fact male departures are nearly ten times as great as female departures. It should also be recalled that these figures indicate not the numbers of residents going abroad on business, but a number somewhat greater than this, as on the average each business man makes more than one voyage a year. Departures on business are summarized in Table 4E.

TABLE 4E. DEPARTURES ON BUSINESS, BY SEX AND ULTIMATE DESTINATION 1953-55

Ultimate Destination	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	82	78	85	245	9	15	10	34
United States	236	311	385	932	48	43	40	131
Canada	26	17	20	63	10	6	1	17
Brit. W. I.	251	225	262	738	19	19	16	54
Latin America	209	222	260	691	23	11	13	47
Dependencies	75	40	61	176	8	2	4	14
Elsewhere	83	68	89	240	14	10	6	30
Total	962	961	1,162	3,085	131	106	90	327

As the males constitute by far the more important of the travellers on business, the patterns shown by these will be considered first. It will be seen from Table 4E. that most of the departures are to the United States, on the average 30 per cent of all departures being to this country. Moreover the departures to this destination have increased notably since 1953, from 240 to 390. This is in contrast to the movements to other countries which have remained relatively stable in dimensions between 1953 and 1955. Second in importance as an area attracting business men are territories of the British West Indies, which account for 24 per cent of the total, the numbers involved being on the average about 240 per year. Nearly as important as the British West Indies are the Latin American countries which account for 23 per cent of the total departures on business, the average number going to these countries being 230 per year. It is of interest that the numbers going to the United Kingdom are very small, about 80 a year, a figure equivalent to 8 per cent of the total. No seasonal pattern distinguishes travel on business among the males, though it must be noted that 10 per cent of all departures occur in the month of May.

Though only one tenth as large as the male departures, those of the females show a pattern very similar to that of the males. The largest number of departures (40 per cent) is to the United States, while 17 per cent go to the British West Indies, 14 per cent to Latin American countries and 10 per cent to the United Kingdom. There is again no marked seasonal feature, though the months of April and May show the largest proportions, 12 per cent and 13 per cent respectively.

Departures to Study

Departures to study evidently cover not only persons going to enrol for normal university study, but probably also all persons travelling abroad to further their professional or vocational efficiency. It is possible also that many persons leaving the island and declaring study as the purpose of travel have other purposes in view as well. Table 4F. summarizes details of departures to study.

Departures of this nature show that during the three-year period the number of females going to study increased much more than the number of males,

TABLE 4F. DEPARTURES TO STUDY BY SEX AND ULTIMATE DESTINATION, 1953-55

Ultimate Destination	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
United Kingdom	134	142	218	494	285	361	571	1,217
United States	189	181	208	578	120	136	111	367
Canada	55	54	56	165	27	19	32	78
British West Indies	9	12	18	39	2	7	7	16
Latin America	16	12	8	36	13	5	3	21
Dependencies	1	—	1	2	1	—	—	1
Elsewhere	2	3	6	11	4	3	1	8
Total	406	404	515	1,325	452	531	725	1,708

and by 1955 730 females left as compared with 520 males. In the case of the females the great majority (71 per cent) go to the United Kingdom and it is departures to this area that have increased markedly, the number in 1955 (570) being double that in 1953. Females going to the United States account for 22 per cent of the total; thus virtually all females leaving the island to study go to the United Kingdom and the United States. Only a very small proportion (5 per cent) go to Canada for this purpose. Once more the United Kingdom and the United States absorb most of the males going abroad to study, but, in contrast to the female pattern, the largest proportion of the males (44 per cent) go to the United States. Second in importance as a country chosen for study comes the United Kingdom, to which 37 per cent of all male students go. As in the case of the females, the numbers travelling to the United Kingdom have risen sharply between 1953 and 1955, from 130 to 220. Relatively and absolutely more males go to Canada than females; the numbers involved remaining almost constant (55) and constituting 13 per cent of the total. About 3 per cent of the males go to British Caribbean territories to pursue studies.

As is to be expected, marked seasonal variations appear in departures to study. Most males leave in September (37 per cent of the total) and August (14 per cent). A similar pattern is revealed by the females, of whom 16 per cent leave in August and 26 per cent in September.

Departures of Dependents

Data yielded by the present study do not make it possible to consider extensively the movement of dependents leaving the island under the immediate charge of adults. Only where the dependent is entered on the same passport as his parent or guardian is it possible to establish that he is in fact travelling under the care of an adult. Where the dependent uses his own travel documents it becomes impossible to link his movement with that of any other departure.

The present tabulation of dependents leaving the island is based only on those accompanying persons declaring that they are leaving permanently in search of work. Unlike the arrivals of dependents virtually all dependents leaving the island travel with adults who are going to seek work. The fact that such declarations are made by these persons does not necessarily imply that the dependents accompanying them are also going to settle abroad permanently, though this is assumed to be the case here. The numbers of dependents thus derived are not large, as can be seen from the summary of Table 4G. Between 1953 and 1955 the numbers going to the United Kingdom rose considerably, from 50 to 200, though dependents accompanying adults to other countries remained relatively unchanged during the period. During 1953-55 most of the dependents, 360 or 58 per cent of the total, went to the United Kingdom, while 12 or 19 per cent went to the United States.

It is important to note that dependents for the most part travel with female adults. This is so in movements to all destinations, though departures to the

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TABLE 4C. DEPARTURES OF DEPENDENTS TO VARIOUS DESTINATIONS, 1953-55

Year	United Kingdom	United States	Canada	Elsewhere	Total
Travelling with Male Adults					
1953	4	6	1	2	13
1954	20	15	1	7	43
1955	14	11	1	1	27
1953-55	38	32	3	10	83
Travelling with Female Adults					
1953	47	26	31	22	126
1954	90	22	11	36	159
1955	187	36	15	18	256
1953-55	324	84	57	76	541
Travelling with Adults of Both Sexes					
1953-55	362	116	60	86	624

United Kingdom emphasize it particularly; thus, during the period, only about 40 dependents left the island under the immediate charge of males, while about 320 went under the care of female emigrants. Of the overall total of dependents leaving the island only about 80 are listed as travelling in the company of male adults.

All of the dependents considered here are under 15 years of age. The proportion under 10 were 84 per cent in 1953, 86 per cent in 1954 and 83 per cent in 1955. The small proportion recorded as over 10 probably derives from the fact that older children usually have their own passports. Thus these tabulations of dependents do not give a complete picture of departures of this class. Many of the dependents over 10 are in fact covered by Table 5C.

No significant pattern emerges from the occupational distribution of the small number of adults accompanying these dependent emigrants. In the case of the females, however, most of the persons involved were housewives: 54 per cent in 1953, 48 per cent in 1954 and 43 per cent in 1955. The only other substantial class of females appearing is that of domestic workers; the proportion of these stand at 17 per cent in 1953, 27 per cent in 1954 and 33 per cent in 1955.

The number of dependents per adult for all departures is between 1.4 and 1.5. It is generally lowest in the case of adults going to the United Kingdom, amounting here to 1.4 in 1953 and to 1.3 in 1954 and 1955. The average number in the case of adults travelling to other destinations is slightly higher.

Modes of Travel

It has already been noted in Chapter 1 that the increased emigration to the United Kingdom has been made possible largely by the introduction of special ships, offering the kind of accommodation suitable to the emigrants and at a price they can afford. It is therefore necessary to consider the importance of sea and air travel in the outward movement from the island. A qualification of the data yielded by the present study must be made. These tell the mode of transport by which the traveller left the island, but this does not necessarily mean that the same mode of travel took him to his ultimate des-

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tion. Several ways of getting to Britain are available. The first and most usual is by sea across the Atlantic, either direct to a British port or to some continental port usually within easy reach of the United Kingdom. Another way is partly by air and partly by sea. The emigrant leaves the island by air and travels to the United States and there boards a ship which takes him on to the United Kingdom. Again, the emigrant may fly direct from Jamaica to Britain. In general the cost of the sea passage is appreciably lower than that of the air passage and it is mainly for this reason that genuine emigrants elect to travel by sea. The coding of mode of travel in this study has been done wholly on the basis of the vessel in which the emigrant left Jamaica. Although the transport in which he arrived at his destination is not considered, it seems safe to assume that only a small proportion leaving the island by air do not complete the voyage by the same means of transport.

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Table 4H. summarizes the proportion of departures by air for the different types of travel distinguished in this study. The most arresting feature is the fall in the proportion of departures by air among those going to seek work. In 1953 73 per cent of the male and 63 per cent of the female departures were by air. These proportions declined to 67 per cent and 60 per cent respectively in 1954, while by 1955 only 19 per cent of the males and 37 per cent of the females leaving the island in search of work departed by air. On the other hand most of the other types of travel show that within the period under study aircraft furnish the major proportion of the transportation. Thus virtually all male departures of Jamaican-born persons returning to their residences in foreign countries, as well as all departures of Jamaican residents on business, are by air. Similarly the proportion of female departures by air is very high in the case of those returning to their foreign residences, those travelling on business and those travelling on holiday. However in view of the overwhelming importance of travel in search of employment, the decline in the extent to which these rely on aircraft is reflected in the overall proportions of departures by air. Thus the overall proportion of departures using aircraft fell from 81 per cent to 37 per cent in the case of the males and from 78 per cent to 53 per cent in the case of the females, during the three-year period.

It is also of interest to consider the importance of air travel in terms of

TABLE 4H. PROPORTION (%) OF DEPARTURES BY AIR, ACCORDING TO SEX AND TYPE OF DEPARTURE, 1953-55

Purpose or Type of Departure	Male			Female		
	1953	1954	1955	1953	1954	1955
To Seek Work	73.2	66.5	19.3	62.9	59.7	36.5
To Study	75.6	77.7	63.7	56.4	64.0	49.1
To Seek Medical Aid	88.0	76.0	79.3	85.4	80.6	88.6
On Holiday	77.7	78.6	79.0	85.6	83.5	82.3
To Return Home	94.8	94.4	92.9	90.4	92.2	91.6
On Business	93.8	95.1	94.4	93.9	87.7	87.8
Other Types	85.7	88.7	81.1	78.4	77.4	71.0
Total	80.7	74.2	36.6	77.7	71.9	53.1

departures to various countries. These are summarized in Table 4I. In general the proportion of departures by air is much smaller in the case of persons going to the United Kingdom than in the case of persons going elsewhere. The proportion of male departures by air to the United Kingdom was 54 per cent in 1953; it rose to 60 per cent in 1954 and then fell to 16 per cent in 1955. Female departures to the same destination show a similar movement though in 1953 and 1954 they were appreciably lower than the corresponding male rate and in 1955 were twice that of the latter. Travel to all other countries has however remained throughout largely by means of aircraft. Almost all travel to the United States and Canada is by air, while travel to Latin America is also mostly by air. It is interesting to note that air travel to the British West Indies became increasingly important, especially among the females, 80 per cent of whom travelled by air in 1955, as compared with 67 per cent in 1953.

TABLE 4I. PROPORTION (%) OF DEPARTURES BY AIR, ACCORDING TO SEX AND DESTINATION, 1953-55

Destination	Male			Female		
	1953	1954	1955	1953	1954	1955
United Kingdom	53.9	60.0	16.2	38.3	49.6	31.4
United States	99.4	98.7	97.8	99.6	99.0	97.6
Canada	98.2	98.9	99.4	96.2	97.4	97.4
British West Indies	87.3	88.7	90.0	66.8	72.7	80.3
Latin America	94.2	96.1	96.9	86.0	87.8	90.7
Elsewhere	76.1	82.1	75.2	69.2	68.4	60.4
Total	89.7	74.2	36.6	77.7	71.9	53.1

(II) Emigration To The United Kingdom

The Development of the Movement

As we have seen in Chapter 1, emigration to the United Kingdom was a direct result of many factors: the contacts with that country promoted by the second World War, growing transport facilities, as well as conditions inside the receiving and sending areas. The overall outward movement in the years prior to 1953 suggests that the emigration to the United Kingdom was even then in progress, though on a limited scale. Clearly, however, the year 1953 marked the commencement of the expanding movement which attained such significance in 1955. Table 4J. summarizes the movement from 1953 to 1955.

In 1953 the average monthly emigration of males to the United Kingdom was nearly 110. The largest monthly movement was that of October when more than 240 emigrated, while the smallest number—30—occurred in March. Despite the monthly variation, part of which is associated with its seasonal features, the movement expanded rapidly. The trend over the twelve months shows that in the initial month only 30 left the island, whereas towards the end of the year the monthly value was 180. Monthly increments amounted to 14, equivalent to a monthly rate of increase of 13 per cent. The

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females show a similar pattern. The monthly emigration averaged 70, being greatest in September (160) and lowest in March (30). Again the trend shows a very steep increase, by 7 per month or a monthly rate of 11 per cent.

TABLE 4J. DEPARTURES TO THE UNITED KINGDOM TO SEEK WORK, BY YEAR, SEX AND MONTH OF DEPARTURE, 1953-55

Month	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
January	80	236	460	776	31	107	199	337
February	55	216	588	859	57	67	305	429
March	25	342	899	1,266	24	176	655	855
April	80	478	922	1,480	71	275	502	848
May	45	246	927	1,218	42	172	604	818
June	39	120	888	1,047	43	77	514	634
July	67	304	312	683	59	217	246	522
August	176	579	1,429	2,184	120	377	745	1,242
September	212	826	1,156	2,194	160	392	612	1,164
October	244	705	1,722	2,671	107	393	836	1,336
November	61	622	1,112	1,795	51	340	597	988
December	200	504	496	1,200	110	268	330	708
Total	1,284	5,178	10,911	17,373	875	2,861	6,145	9,881

In 1954 male emigration to the United Kingdom increased to an average of 430 per month, the highest number of departures being in September (830) and the lowest in June (120). Though the monthly growth of the movement in terms of absolute numbers was much greater than in 1953, 42 as against 14, the monthly rate of increase was less, 10 per cent as against 13 per cent in 1953. Female emigration rose to a monthly average of nearly 240, while the monthly increase to the movement stood at 25. In contrast to the male movement, however, the monthly rate of growth (13 per cent) exceeded that experienced in 1953.

By 1955 male emigration to the United Kingdom averaged over 900 a month. Variation in the monthly values was greater than in the previous years, but the number emigrating in the month showing the largest migratory activity (October) amounted to 1,720, which was more than the whole male emigration to the United Kingdom during 1953. Monthly increments to the movement amounted to 45 or very near to that of 1954, thus emphasizing the reduction in the monthly rate of growth (4 per cent). In the case of the females monthly emigration rose to 510, being greatest in October (840) and lowest in January (200). Monthly increments to the movement declined to 21, while the monthly rate of increase was down to 5 per cent.

The rapid expansion of the movement during the initial year, followed by the declines in the monthly rates of increase, as well as in the absolute numbers by which the monthly values were increasing, are all compatible with an approaching levelling off of the movement. It is of course hazardous to use the trends of the three years in order to project the pattern of migration, say in 1956. But on the basis of the present analysis, if even a levelling off of the movement does not appear in 1956, this year is unlikely to witness a

monthly increase as high as that obtaining in 1955 (between 4 per cent and 5 per cent).^a

Another important feature of emigration to the United Kingdom is its seasonal variation. A seasonal index, in the construction of which account is taken of the upward trend, shows definitely that most of the emigration takes place between the months of August and October. This can be seen from Table 4K. Both sexes show the same features; however in the case of the males the month of greatest activity tends to be October, whereas it is August in the case of the females. Both indices also show that emigration in the month of April exceeds substantially the monthly average. The months of lowest activity are the winter months December to February, and the months of June and July.

TABLE 4K. SEASONAL INDEX OF DEPARTURE TO THE UNITED KINGDOM TO SEEK WORK.

Month	Seasonal Index	
	Male	Female
January	88.5	57.7
February	79.7	69.0
March	90.0	97.0
April	128.4	131.2
May	81.1	96.4
June	60.6	73.0
July	60.9	79.9
August	148.7	154.9
September	151.1	154.1
October	155.2	130.1
November	80.6	82.4
December	75.3	74.1

Note: Average monthly value = 100.0.

Since, evidently, the unskilled emigration, as will appear presently, assumed greater importance as the movement progressed it is necessary to consider the trend of development among the two major occupational classes of males emigrating to the United Kingdom, the skilled and semi-skilled on the one hand and the unskilled on the other. In 1953 males claiming some degree of skill were leaving the island at an average of 70 per month and the movement was increasing by about 9 persons per month. The months of

^aIn fact, third degree curves fitted to the monthly data suggest a marked reduction in the course of the movement in 1955. With the origin placed in January, 1953, the curve for the males is

$$y = 85.20 - 15.51X + 2.73X^2 - .04X^3$$

and that for the females is

$$y = 71.94 - 13.46X + 1.86X^2 - .03X^3$$

On the basis of the three-year experience therefore we may assume that the expansion of the movement, in terms of absolute numbers, attained a maximum between the months of October and November, 1954, in the case of the males, and between the months of September and October, 1954, in the case of the females. This affords some ground for assuming that the movement will level off, if not in fact decline in 1956. But the tentative nature of any such inference will be apparent in view of the short period on which it is based and the many factors, both internal and external, on which the course of emigration after 1955 depends. Moreover curves of the type considered here are especially affected by the comparatively low emigration in November and December, 1955, due in some measure to the seasonal nature of the movement. Another factor tending to reduce emigration at the end of 1955 was the shortage of passports at this time,

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greatest activity were September and October, during which 140 and 170 males respectively left the island. In March, the month of lowest activity, only 10 persons emigrated. The considerable expansion of the movement in 1954 brought the average monthly emigration to nearly 290, while the movement continued to increase by about 30 persons per month. August to November witnessed a considerable expansion of the movement, while the maximum emigration was recorded in September (490). Only 100 persons left the island in June, the month of least activity. By 1955 the monthly emigration rose to about 520. In the month of maximum activity (October) the loss to the island of 990 exceeded the emigration of this class of worker during the entire year of 1953. The smallest number leaving the island (170) was recorded in July. The size of the movement continued to grow, but only by 31 persons per month as compared with 34 in 1954. The indication from the three years' experience is that emigration of the skilled males was, in 1955, either slowing down or at least increasing much more slowly than it did in 1954.^a

In the case of the unskilled males, the first year was one of only modest activity, the monthly average number being only 12, though each month saw an increase, on the average, by about 5 persons. By 1954 however the movement increased appreciably in dimension, being about 90 per month, and each month was expanding by about 9 persons. As in the case of the skilled workers, the months of August to November witnessed a marked increase in the movement. Emigration was highest (160) in September, and lowest (50) in January. With the appreciable development of this phase of emigration in 1955 the monthly average was up to nearly 300, that is more than the entire emigration of unskilled males recorded in 1953. October showed most departures when 570 left the island, a figure twice the number emigrating during the whole of 1953; during July of 1955 departures were lowest, standing at 100. The continued expansion of the movement in 1955 should be noted. Each month it was growing on the average by about 20 persons, that is by an amount more than twice that of 1954. The departures of unskilled workers from the island over the three year period strongly suggest that this phase of emigration may be expected to continue its increase into 1956 and that the unskilled, the rural dwellers and the illiterates will appear in mounting proportions in the emigration stream to the United Kingdom after 1955.^b

Another feature of the skilled and unskilled male emigrants that must be

^aDespite the limitations of trend lines fitted to these data and the tentative nature of inferences of future movements to be drawn from them, it is of interest to note that a third degree curve fitted to the monthly emigration data for skilled males

$$y = 62.88 - 14.70X + 2.27X^2 - .04X^3$$

suggests two features of importance. In the first place it suggests that after July 1954 the expansion of the movement of skilled workers, in terms of absolute numbers, began to decline. Secondly, and more significant, the inference is that the monthly numbers were, towards the end of 1955, at a maximum.

^bIn contrast to the trend line for the skilled emigrants, that for the unskilled

$$y = 25.85 - 6.72X + .74X^2 - .01X^3$$

strongly suggests that a continued expansion of emigration to the United Kingdom may be witnessed after 1955.

treated here is the differences in the seasonal patterns of the two. Some seasonal variation appears in both, as can be seen in Table 4L. Here the variation for the unskilled is based only on 1954 and 1955, since the movement in 1953 was clearly not well developed, while in both cases due account is taken of the upward trend of the emigration. Though both show low frequencies of movement in the winter months and much greater levels in the months of August to October, the seasonal pattern is much more clearly defined among the skilled classes. The latter seem to avoid the winter months to a greater extent than the unskilled. Whether these differences are associated with greater discrimination on the part of the skilled workers, and a better discernment of the relative advantages of different dates of travel is a point which cannot be settled from the data of the present study.

TABLE 4L. INDICES OF SEASONAL VARIATION AMONG UNSKILLED AND SKILLED EMIGRATION

Month	Unskilled	Skilled
January	94.5	92.6
February	102.7	79.3
March	110.7	79.8
April	138.6	115.4
May	94.0	71.5
June	67.3	61.4
July	49.5	66.5
August	140.3	147.3
September	123.2	150.0
October	133.7	164.6
November	96.8	87.5
December	48.6	83.9

Note: The average monthly value = 100.0.

Occupational Composition of Emigrants

The occupational pattern of emigrants to the United Kingdom is of especial importance, and is summarized for male departures in Table 4M. As

TABLE 4M. MALE DEPARTURES TO THE UNITED KINGDOM TO SEEK WORK, BY OCCUPATIONAL CLASS, 1953-55.

Occupational Class	1953	1954	1955	1953-55
01 Planters	7	12	17	36
02 Farm Workers	159	740	2,648	3,547
03 Carpenters	207	906	1,494	2,607
04 Masons	66	368	650	1,084
05 Mechanics, etc.	242	1,021	1,915	3,178
06 Other Skilled	240	850	1,667	2,757
07 Unskilled Labourers	72	252	729	1,053
08 Clerks, etc.	72	252	426	750
09 Senior Persons in Trade, etc.	23	82	167	272
10 Executives and Managers	3	2	10	15
11 Domestic Workers	15	79	142	236
12 Personal Service Employees	12	48	61	121
13 Tailors	86	288	555	929
14 Nurses	—	2	6	8
15 Teachers	2	17	43	62
16 Civil Servants	3	6	15	24
17 Professionals	19	33	57	109
18 Others	20	64	81	165
19 No Occupation Given	23	100	88	211
20 Students	13	56	136	205
21 Others Not Employed	—	—	4	4
Total	1,284	5,178	10,911	17,373

males comprise the great majority of emigrants to the United Kingdom in search of work, the characteristics of these will be considered first.

Emigration of males to the United Kingdom was in the initial year (1953) largely a movement of skilled workers. The five occupational classes (codes 03, 04, 05, 06, and 13) which can be conveniently taken as covering all the skilled and semi-skilled workers, accounted for most of the male emigrants, numbering 840, or 65 per cent of total male departures in search of work. The most numerous occupational classes were mechanics, etc. (code 05) and the miscellaneous semi-skilled and skilled class (code 06), each of which accounted for 19 per cent of the total in 1953. Unskilled males (codes 02, 07, 11 and 12) amounted to only 260 or about one fifth of the total, and the most numerous among these were farm workers (code 02) 160 of whom left the island, equivalent to 12 per cent of all males going to the United Kingdom in search of work.

The year 1954 witnessed a considerable increase both in the skilled and the unskilled occupational classes emigrating. The total skilled males rose to 3,430, though the proportion this constituted of the total (66 per cent) was almost identical with that of 1953. Particularly marked was the rise in the number of mechanics, etc., from 240 to 1,020, which latter figure accounted for one fifth of the total male emigration to the United Kingdom. The number of carpenters also rose steeply, from 210 to 910, and thus comprised 18 per cent of total male departures in 1954. The increase in the unskilled classes, from 260 to 1,120, resulted in a slight rise in the proportion of male emigrants falling within these classes, from 20 per cent to 22 per cent. However the skilled workers continued to dominate the pattern of emigration in search of work to the United Kingdom in 1954.

The total number of skilled males emigrating to the United Kingdom rose from 3,430 in 1954 to 6,280 in 1955, but in terms of proportions of the totals it declined, as the skilled accounted for 61 per cent of total male departures. In each case the proportion of the skilled classes fell. This decline meant that the number of unskilled emigrants involved rose markedly. In fact the unskilled showed a three-fold increase, from 1,100 to nearly 3,600, in 1955. This was largely the result of the great rise in the number of farm workers emigrating to the United Kingdom, the numbers here increasing from 740 in 1954 to 2,650 in 1955. Whereas in 1954 farm labourers comprised 14 per cent of the total males emigrating, the proportion rose to 24 per cent in 1955. In 1954 farm workers were the fourth largest occupational class; in 1955 they were by far the largest, exceeding the second largest (mechanics, etc.) by 38 per cent.

In summary it can be said that between 1953 and 1955 the total unskilled males emigrating to the United Kingdom experienced a fourteenfold rise, as compared with a sevenfold rise shown by the skilled. The remaining occupational classes which do not fall within the skilled or unskilled as here defined also rose sharply from 1953 to 1955, being 180 in 1953, 630 in 1954 and 1,050

in 1955. But because of the greater increase shown by the other classes, these miscellaneous elements constitute a decreasing proportion of the total emigration, 15 per cent in 1953, 12 per cent in 1954 and 6 per cent in 1955.

In order to obtain a more detailed picture of the occupational composition of the emigrants to the United Kingdom, the important classes, codes 05 and 06, have each been broken down into 8 subdivisions, by taking a 10 per cent sample from the code sheets. These tabulations are based on all the entries of the code sheets numbered 10, 20, 30, etc. The results are shown in Tables 4N. and 4O. Mechanics are by far the largest element in code 05, accounting for 62 per cent of the total in 1953, 50 per cent in 1954 and 57 per cent in 1955. Others under this code who left the island in appreciable numbers were chauffeurs, welders, and electricians. There is some suggestion that the range of skilled workers emigrating increased between 1953 and 1955, but in view of the very small numbers involved in 1953 this cannot be asserted with assurance; in any event the proportions of code 05 workers covered by mechanics, chauffeurs, welders and electricians did not change much during the period; these together accounted for 88 per cent of all code 05 males in 1953, 83 per cent of these in 1954 and 89 per cent of those in 1955.

TABLE 4N. BREAKDOWN OF OCCUPATIONAL CODE 05 MALES EMIGRATING TO THE UNITED KINGDOM, 1953-55

Occupational Class	1953	1954	1955	Total 1953-55
Mechanics	150	520	1,090	1,760
Chauffeurs	20	200	260	480
Welders	20	70	100	190
Electricians	20	60	250	330
Plumbers	—	30	70	100
Blacksmiths	—	10	50	60
Tractor Drivers	—	30	50	80
Others	30	100	40	170
Total	240	1,020	1,910	3,170

Again there is a suggestion from the breakdown of code 06 of an increase in the range of occupational types involved between 1953 and 1955; once more the relatively small number in 1953 precludes the drawing of any firm conclusion on this matter. The two most important subdivisions of code 06 are painters and shoemakers, though cabinet-makers appear in appreciable numbers. Over the three year period 700 shoe-makers left the island, a number equivalent to one quarter of all code 06 emigrants. The total number of painters emigrating during the period (520) amounted to 19 per cent of the code, while 13 per cent of the total consisted of cabinet makers.

The breakdowns of codes 05 and 06 make possible a summary of the losses experienced by the island in respect of workers engaged in the building industry. These are given in Table 4P. Carpenters comprise the majority of these, as 2,600 left the island during the years 1953-55. Masons were second in number, 1,100 leaving the island over the same period. Painters leaving the island exceeded 500, while the number of plumbers involved was about

TABLE 40. BREAKDOWN OF OCCUPATIONAL CODE 06 MALES EMIGRATING TO THE UNITED KINGDOM 1953-55

Occupational Class	1953	1954	1955	Total 1953-55
Painters	60	140	320	520
Shoemakers	50	300	350	700
Cabinet Makers	50	90	230	370
Radio Operators	80	—	30	110
Bakers	—	10	110	120
Coopers	—	20	50	70
Telephone Operators	—	10	40	50
Others	—	280	540	820
Total	240	850	1,670	2,760

100. Thus the three years witnessed a gross emigration of 4,300 skilled workers directly associated with the building industry.

TABLE 4P. EMIGRATION TO THE UNITED KINGDOM OF SOME WORKERS EMPLOYED IN THE BUILDING INDUSTRY, 1953-55

Occupation	1953	1954	1955	Total 1953-55
Carpenters	210	910	1,490	2,610
Masons	70	370	650	1,090
Painters	60	140	320	520
Plumbers	—	30	70	100
Total	340	1,450	2,530	4,320

Several features serve to demarcate the occupational pattern of females emigrating to the United Kingdom in search of work from the pattern of the males, though, as has already been emphasized, both sexes show considerable rises in numbers between 1953 and 1955. Female departures are given in Table 4Q. In the first place it is important to note that a substantial proportion of these females declare themselves to be outside the labour force at the time of their departure. This contrasts strongly with the position of the males, where the proportions declaring themselves to be outside the working force are negligible. Most women who do not give an occupation fall within the category housewives (code 20); this does not of course signify that they are necessarily outside the labour force. Nevertheless the suggestion from the migration data is that some women going to seek work in the United Kingdom were not in gainful employment before they left the island. The proportions of the total female departures declared to be outside the labour force were 14 per cent in 1953, 13 per cent in 1954 and 19 per cent in 1955. Probably therefore a sizeable proportion of the females emigrating constituted only a nominal decrement to the island's labour force.

Female departures to the United Kingdom in search of work were largely concentrated into two occupational classes. Of considerable importance was the indefinite class of so-called dressmakers, which accounted for 48 per cent of the total in 1953, 52 per cent in 1954 and 47 per cent in 1955. The other important female occupational class involved was domestic service (code 11). This accounted for 13 per cent of the total in 1953, 12 per cent in 1954 and 18 per cent in 1955. Apart from these two the only other occu-

TABLE 4Q. FEMALE DEPARTURES TO THE UNITED KINGDOM TO SEEK WORK, BY OCCUPATIONAL CLASS, 1953-55

Occupational Class	1953	1954	1955	1953-55
01 Planters	—	1	—	1
02 Farm Workers	1	7	21	29
03 Carpenters	—	5	4	9
05 Mechanics, etc.	5	6	4	15
06 Other Skilled	9	68	141	218
07 Unskilled Labourers	10	19	50	79
08 Clerks, etc.	59	201	370	630
09 Senior Persons in Trade	4	27	52	83
10 Executives and Managers	3	1	3	7
11 Domestic Workers	116	353	1,087	1,556
12 Personal Service Employees	26	106	169	301
13 Dressmakers	417	1,480	2,780	4,677
14 Nurses	29	58	75	162
15 Teachers	33	58	119	210
16 Civil Servants	1	—	8	9
17 Professionals	3	2	3	8
18 Others	5	10	25	40
19 No Occupation Given	30	94	103	227
20 Housewives	95	255	835	1,185
21 Students	25	113	293	431
22 Others Not Employed	4	2	6	12
Total	875	2,861	6,144	9,880

pational class which accounted for more than 5 per cent of the total was code 08, which covers low grade workers in commerce of a wide variety.

It is difficult to say whether the emigration of females from the island constitutes a decrement to the ranks of the skilled workers to the same extent as emigration of the males. If we treat dressmakers as unskilled workers then most of the female movement can be considered as affecting only the unskilled section of the island's labour force. Even if we consider it as a skilled category however it is clear that the proportion of skilled or semi-skilled workers is lower than in the case of the males.

Illiterate Emigrants to the United Kingdom

An interesting feature of emigration to the United Kingdom has been the rising number of illiterates involved. Without a rigorous test of the emigrants no adequate picture of their level of education can be obtained. Unfortunately the only clue to the educational attainment of these emigrants that can be secured from the migration cards is their ability to sign their names. The limitations of such a criterion of literacy are manifest. Indeed the tortuous nature of many of the signatures produced leaves no doubt as to the illiterate conditions of many emigrants; nevertheless wherever a signature is attempted the migrant is given the benefit of the doubt. The persons coded illiterate in the present study are those who affix an x mark to the card. The coding of literacy status of emigrants, in these terms, was done for 1954 and 1955, but not for 1953.

The proportion of illiterates is very small, thus suggesting that the great body of emigrants are educationally above the average of all workers in the island. This is in accord with the findings of Maunder, who concluded

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that in 1954 the Jamaican emigrants to the United Kingdom were an educationally "superior group" (9). Cumper has also indicated from a study of Barbadian emigrants that their educational attainment is higher than the average of the island as a whole (3). The number of illiterates disclosed by the present study is very small, 69 in 1954 and 261 in 1955; but evidently it will continue to increase as the proportion of emigrants drawn from the rural parishes and from the unskilled classes rises. It is important that the illiterates in this study are largely males; there were only 6 females coded as illiterate in 1954 and 33 in 1955. Because of the small numbers of the latter sex involved detailed considerations will be confined to the males.

The occupational distribution of the male illiterates is given in Table 4R. These emigrants are manifestly for the most part unskilled. In 1954 40 per cent were farm workers and 14 per cent general unskilled workers. In 1955 even greater proportions were of unskilled status, 60 per cent being farm labourers and 15 per cent general unskilled workers. However the fact that appreciable proportions of these illiterate migrants — 44 per cent in 1954 and 25 per cent in 1955 — declare themselves as possessing some skill is in keeping with the tenuous nature of some of the occupational classes delineated in this study. It remains clear however that the claims to the possession of some occupational skill are much less frequently made by the illiterate emigrants than by their literate counterparts.

TABLE 4R. OCCUPATIONAL DISTRIBUTION OF ILLITERATE MALE EMIGRANTS TO THE UNITED KINGDOM, 1954-55

Age Group	Occupational Code 1954							Occupational Code 1955						
	02	03	04	05	06	07	Total	02	03	04	05	06	07	Total
15 -	-	-	-	1	-	-	1	2	-	2	-	1	-	5
20 -	2	-	-	2	-	-	5	23	-	4	-	4	6	39
25 -	3	-	1	-	2	2	8	33	4	2	2	1	3	44
30 -	6	2	1	-	2	1	12	19	1	4	1	5	7	39
35 -	4	-	1	1	2	1	9	15	-	2	1	2	5	27
40 -	3	2	1	1	1	1	9	24	1	2	3	4	3	35
45 -	3	-	-	1	3	2	9	12	3	-	1	1	3	21
50 -	3	1	2	-	1	1	8	7	-	3	2	-	4	14
55 +	1	-	-	-	-	1	2	2	-	-	-	-	2	4
Total	25	5	6	6	11	9	63	137	9	19	10	18	33	228

Another important feature of these illiterate emigrants is their relatively advanced age. They are in general appreciably older than the general body of emigrants. Thus, whereas the average age of all male emigrants to the United Kingdom in 1954 was 32.1, the average age of illiterates was 38.5 years. In 1955 the average age of illiterates was 34.7, whereas the overall average stood at 32.0. The fact that the so-called skilled elements of the illiterates are of relatively advanced age suggests that their claim to skill may rest solely on long association with a given industry.

The high proportion of unskilled workers, and in particular of farm labourers, among the illiterate male emigrants leads one to expect that most of them are of rural origin, and this in fact appears. In 1954, of the 63 illi-

terates emigrating to the United Kingdom only 6 came from the Kingston-St. Andrew area, while in 1955 only 15 of the 228 involved came from these urban areas. In 1955 the largest number came from Clarendon (47) and St. Elizabeth (43). Not only are they predominantly rural, but they are overwhelmingly persons who have not engaged in internal migration to any significant degree. According to their declarations, most of them were born in the parish in which they resided before emigrating.

The female illiterates again show a high proportion of unskilled workers. The extremely small numbers involved and the fact that one third of them merely record themselves as housewives preclude any extensive discussion of them.

Parish of Residence and Parish of Birth of the Emigrants

Considerations of parish of residence and parish of birth of the emigrants remain of paramount interest, not only because they serve to show the extent to which the several parishes are affected by emigration, but also because they help in relating internal migration to currents of external migration. However there are numerous limitations to the data available for analyses of this type. For instance it is not known whether information on parish of birth on the migration cards indicates the usual parish of residence of the emigrants' parents at the time of birth, or merely the parish in which the emigrants happened to be born. However as most emigrants are above 25 years of age they were born before the period of growing institutional deliveries, so that probably no serious errors of this nature are involved. Again it is possible that some persons giving Kingston or St. Andrew as their place of residence may in fact have lived in rural areas and have migrated to the urban centre merely for the purpose of effecting their departure.

The marked changes in the occupational composition of the emigrant stream to the United Kingdom are reflected in the data on parish of residence and on parish of birth, shown in Table 4S. The marked decline in the proportions of emigrants contributed by Kingston is in keeping with the rising proportion of farm labourers leaving the island. Among the males one quarter of the emigrants were, in 1953, residents of Kingston. But this proportion fell to 17 per cent in 1955, though of course the numbers involved rose markedly, from approximately 300 in 1953 to nearly 1,800 in 1955. By contrast the proportion contributed by St. Andrew changed very little over the period, being 15 per cent in 1953, 17 per cent in 1954 and 13 per cent in 1955. Small increases in the proportions contributed by all rural parishes are in evidence, and by 1955 Clarendon and St. Catherine were each contributing 11 per cent of the total emigration. Females show a somewhat different pattern. In 1953 39 per cent of all female emigrants to the United Kingdom were residents of Kingston; this proportion declined to 29 per cent by 1955. As in the case of the males, however, the proportion contributed by St. Andrew changed little, being 21 per cent in 1953, 23 per cent in 1954 and 20 per cent in 1955. There are some increases in the proportions

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of females coming from rural areas, but, by comparison with the males, these remain very small. In fact the outstanding difference in the pattern of migration for the two sexes is the much larger proportion of females coming from the urban centre. Thus the proportions of males resident in the Kingston-St. Andrew area were 40 per cent in 1953, 39 per cent in 1954 and 30 per cent in 1955, whereas the corresponding figures for the females were much higher, 60 per cent, 58 per cent and 49 per cent respectively. This again is in keeping with the differential in the occupational grouping for the two sexes, and in the marked differences in the proportions of illiterates.

TABLE 4S. EMIGRANTS (BOTH SEXES) TO THE UNITED KINGDOM BY PARISH OF RESIDENCE AND PARISH OF BIRTH, 1953-55

Parish	Parish of Residence			Place of Birth		
	1953	1954	1955	1953	1954	1955
Kingston	657	2,101	3,549	205	629	1,057
St. Andrew	373	1,518	2,615	97	395	852
St. Thomas	92	409	889	107	478	1,030
Portland	144	404	842	151	483	1,145
St. Mary	43	186	433	111	446	940
St. Ann	86	314	834	133	558	1,506
Trelawny	36	164	464	50	244	660
St. James	32	152	433	57	233	534
Hanover	72	284	623	87	373	830
Westmoreland	28	194	854	72	375	1,237
St. Elizabeth	110	448	1,181	141	700	1,736
Manchester	90	357	721	129	497	1,120
Clarendon	209	633	1,681	222	808	2,019
St. Catherine	167	770	1,742	179	847	1,972
Unknown	20	105	192	340	845	278
Foreign	—	—	—	78	128	190
Total	2,159	8,039	17,055	2,159	8,039	17,055

The distribution of emigrants to the United Kingdom by parish of birth is, in general, in broad agreement with the distribution by parish of residence. But because of the strong in-migration into the urban centre, the numbers of those born in the Kingston-St. Andrew area are, as is to be expected, much lower than in the case of the residents. Again the evidence is of a considerable rise in the proportions from the rural areas, while those born in Kingston-St. Andrew have declined appreciably during the three-year period.

The loss experienced by the several parishes as a result of emigration is best expressed in terms of rates of emigration affecting each parish. Two such rates can be derived, one based on emigrants residing in the parish and the other based on emigrants born in the parish. Rates of these two types are shown in Table 4T. for 1954 and 1955. As is to be expected, rates based on the resident population of the parish show that by far the heaviest loss is experienced by the urban area and by the parishes contiguous to it. In the years considered the parishes most affected were Kingston, St. Andrew, Portland, St. Thomas, and St. Catherine. The rates for the urban area may be slightly inflated by the presence of persons who, having left their normal parish of residence specifically to arrange for emigration to the United King-

dom, erroneously declare Kingston as their parish of residence. Nevertheless it remains clear that the rates of emigration experienced by Kingston — 148 per 10,000 in 1954 and 239 in 1955 — are associated with the considerable genuine in-migration into the city. It is of interest that Portland, affected strongly by emigration in the past, suffers a loss due to emigration greater than that of all other parishes except the urban area. To some extent it appears that the rates of emigration based on resident populations tend to decline as the distance from the urban centre increases, and that the lowest rates are, for the most part, in the west of the island. Thus Trelawny, St. James, and Westmoreland show relatively low rates of emigration. However, Hanover proves the exception, for here the rates — 47 in 1954 and 103 in 1955 — are more similar to those of parishes contiguous to the Kingston-St. Andrew area. On the whole these rates emphasize that the movement to the United Kingdom began in the urban area and the immediately surrounding parishes, that in short the areas of lowest fertility, highest educational attainment and presumably greater social mobility have in the main contributed most to the emigration stream in 1953; but though these continued to supply large proportions in the following years, the contribution of the rural parishes in the west of the island increased markedly.

TABLE 4T. RATES OF EMIGRATION PER 10,000 PARISH POPULATION, 1954-55

Parish	Parish of Residence Rates		Parish of Birth Rates	
	1954	1955	1954	1955
Kingston	147.7	239.3	44.2	71.3
St. Andrew	82.1	140.7	21.4	45.9
St. Thomas	55.1	118.4	64.4	137.2
Portland	58.6	120.6	70.0	155.4
St. Mary	19.5	44.8	46.7	97.2
St. Ann	27.2	71.3	48.4	128.8
Trelawny	27.7	77.5	41.3	110.2
St. James	19.1	53.9	29.4	66.4
Hanover	47.4	102.8	62.3	137.0
Westmoreland	18.0	78.1	34.8	113.0
St. Elizabeth	36.5	94.6	57.0	139.1
Manchester	33.0	65.7	46.0	102.0
Clarendon	41.6	108.5	53.1	130.9
St. Catherine	52.3	116.7	57.5	132.1

The rates based on the parish-of-birth migration data present a somewhat different picture. As is to be expected, the urban parishes no longer show the highest rates. Thus St. Andrew, with rates per 10,000 of 21 in 1954 and 46 in 1955, is lowest on the scale, while the rates of Kingston, 44 in 1954 and 71 in 1955, are tenth and twelfth respectively. By contrast the parishes contiguous to the urban district appear as very important contributors to the emigration stream. Portland, a parish, as is well known, with a long history of emigration, shows the highest rates, 70 in 1954 and 155 in 1955. Again there is a tendency for the parishes at the extreme west of the island to be relatively lightly affected by emigration to the United Kingdom. Low rates are shown by St. James and Westmoreland, but again for some unknown reason the rates of emigration from Hanover (62 in 1954 and 137 in 1955),

are nearer to those of the parishes of St. Thomas and St. Catherine, which, after Portland, exhibit the highest rates of emigration.

In view of the very appreciable scale of internal migration witnessed in recent years, one question that will inevitably arise is what relation, if any, can be discerned between external migration affecting the several parishes and the corresponding internal migration. No data from the 1953 Population Survey on internal migration are at present available. And in the absence of any other data, the comprehensive information on internal migration furnished by the 1943 census is drawn on for this purpose. Rates of out-migration for 1921-43 per 1,000 of the parish populations of 1943 show that, apart from Kingston-St. Andrew, an area of in-migration absorbing most of the out-migrants from the rural parishes, the parish with the highest rate of loss due to internal migration is St. Elizabeth, while second comes St. Mary, and then St. Ann. At the lower end of the scale come St. James, Hanover, Clarendon, and St. Thomas. In the same way we can conceive the emigrants to the United Kingdom each year as being themselves a special group who in the past were also subject to internal migration. As a measure of internal migration among this group, the numbers living outside their parish of birth, per 1,000 emigrants born in the parish, is used here. Correlation coefficients for the twelve rural parishes between rates of out-migration from the 1943 census and rates per 1,000 emigrants living outside their parish of residence at the time of their departure, have been calculated. The small positive values secured are $r = .35$ in 1953; $r = .47$ in 1954; and $r = .62$ in 1955. These suggest that internal migration tends to be associated with external, that, in short, the greater the loss experienced by a rural parish through out-migration, the greater tends to be the loss it experiences through external migration. However, a more detailed study of the data, by occupation and parish of birth, must be done before this interrelationship can be conclusively established.

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CHAPTER 5

GENERAL EFFECTS OF EMIGRATION ON POPULATION GROWTH

External migration may have profound effects on the size, composition and rates of growth of a population, and these aspects therefore demand close attention in the present study. The recent outward movement, which has attained appreciable dimensions only in 1954, has not been in progress for a sufficiently long period to have any considerable influence on the size and structure of the population. Indeed no major changes are to be noted in the three years 1953-55. Nevertheless it is clear that emigration, if continued for a long period at the level of 1955, will have very definite effects on rates of growth and on population structure. And in this chapter some attention will be directed to these in assessing the reproductive performance of the population if it is exposed to relatively high rates of emigration for an extended period.

An important problem to be faced before any analysis of these effects can be undertaken is the precise definition of the terms emigration and immigration to be adopted. The definition in current usage by the immigration authorities of the island and adopted by the Registrar General in the calculation of annual estimates of the population is simple. Immigration means a total of *all* arrivals into the island, irrespective of their place of residence, purpose of travel or length of stay in the island. The term emigration embodies a similar comprehensive approach; it covers *all* departures from the island, irrespective of their place of residence, purpose of travel or length of stay abroad. The migration balance is the difference between these two totals. Administratively, this is a simple approach, which does not call for any detailed tabulation of records. The only sources necessary to compile these statistics are the ships' manifests, which merely list the names of the passengers and details concerning their passports. In view of the fact that the present study rests on certain selected categories of migrants, the all-inclusive approach of the immigration authorities cannot be adopted here. It is clear that several definitions of emigration, immigration and migration balance are possible from the present scheme of tabulation, and these will be considered in a later chapter. For the purpose of the present analysis of the effects of migration on the size and rates of growth of the population, immigration means all persons entering the island in search of permanent employment, as well as all other persons who declare that they are entering the island permanently for some reason other than seeking employment. Emigration means all departures in search of permanent employment abroad as well as departures of persons leaving the island to settle abroad permanently for other reasons. Thus in both cases it is essentially the length of stay and the purpose of travel as declared by the migrant that determine permanent

migration in the present context. As will be shown later in this study, over the three-year period these definitions yield migration balances not far from the passenger movements of the immigration authorities.

Migration constitutes one source of loss or gain to a population, and natural increase the other. The sources of loss or decrement and of gain or increment to a population are four in number. Two of these, births and immigration, fall within the category of increments while the other two, deaths and emigration, constitute the sources of decrement. These increments and decrements are summarized in Table 5A. for the period under study. It shows births, deaths, immigration and emigration affecting both sexes of the population in 1953, 1954 and 1955. It is at once clear that the dominant element determining population movements during the period is the fertility component. Births number 51,100 in 1953, 53,600 in 1954, and 55,900 in 1955. The source of increment immigration is small, being lowest (950) in 1954 and highest in 1955 (1,300). The most arresting feature of the decrements is the mounting importance of emigration. In 1953 the largest source of decrements was the mortality component, which stood at 15,400, compared with emigration to the extent of 3,800. In 1954, though deaths still comprised the chief source of loss to the population, numbering 16,200, emigration had risen to 9,900 or to more than half the number of deaths. By 1955, the pattern of decrement altered completely, with emigration numbering 18,900 and thus exceeding deaths by 3,600. So that although the total increments to the population rose from 52,300 in 1953 to 57,200 in 1955 the much greater rise of the decrements, from 19,300 in 1953 to 34,200 in 1955, meant a considerable reduction in the annual gain to the population. In 1953 the population of the island increased by 33,100; this declined to 28,400 in 1954 and to 23,000 in 1955. Thus the overall gain to the population was reduced by 30 per cent within the three years. The changes these declines in net gains imply are best summarized in terms of the annual rate of growth experienced by the population. As will be seen from Table 5A., this declined from 2.2 per cent in 1953 to 1.9 per cent in 1954 and 1.5 per cent in 1955.

It is instructive to compare briefly the effects of the recent movements on the island's population with the effects of past currents of emigration. Though emigration was never as significant a determinant of population growth as in the territories of the Eastern Caribbean, where migration dominated patterns of growth to a marked degree, still Jamaica did experience sizeable outward movements between 1881 and 1921, and these must be compared with the recent emigration of 1953-55. In order to assess the effects of emigration on population growth, it can conveniently be related to natural increase and this has been done in Table 5B., which shows the annual natural increase and the net emigration experienced in these historical periods marked by net emigration as well as in the three recent years 1953-55.

The present net outward movement is, in terms of absolute numbers, on a much higher level than that experienced in the past. For instance, in the

TABLE 5A. BIRTHS, DEATHS, IMMIGRATION AND EMIGRATION AFFECTING THE POPULATION, 1953-55

Source of Increment or Decrement to Population		1953	1954	1955
Increments	Births	51,130	53,580	55,880
	Immigration	1,210	950	1,330
	Total	52,340	54,330	57,210
Decrements	Deaths	15,440	16,250	15,270
	Emigration	3,810	9,890	18,920
	Total	19,250	26,140	34,190
Net gain		33,090	28,390	23,020
Mean population		1,487,300	1,517,500	1,542,800
Annual rate (%) gain		2.2	1.9	1.5

TABLE 5B. ANNUAL NATURAL INCREASE AND NET EMIGRATION DURING PERIODS OF NET EMIGRATION

Period or Year	Average Annual Natural Increase (a)	Average Annual Net Emigration (b)	(b) as % (a)
1881-1891	8,350	2,480	29.7
1891-1911	11,780	2,200	18.7
1911-1921	10,380	7,710	74.3
1953	37,690	2,600	6.9
1954	37,330	8,940	23.9
1955	40,610	17,590	43.3

early period of emigration to Panama and other Latin American areas in 1881-91 the net outward movement was only 2,500 per year. This emigration reached its zenith in 1911-21, when conditions in the island greatly stimulated emigration and when there were no serious obstacles to entry into the United States and Latin American countries. The scale of net emigration during these years was 7,700 per year. With the resurgence of emigration, the net outward movement in 1954 (8,900) exceeds that of 1911-21, while the net outward movement in 1955 (17,600) is more than twice the annual average of 1911-21. It is however more important to consider to what extent these net outward movements tend to retard population growth. For though recent net emigration is on a much higher level than any experienced in the past it is equally relevant to note that the natural increase of recent years is vastly in excess of that obtaining prior to 1921. It appears that in 1881-91 the net emigration was 30 per cent of the corresponding natural increase. This proportion declined to 19 per cent in the succeeding intercensal interval. During the period most affected by emigration the loss constituted 74 per cent of the natural increase and this was one of the prime causes of the low annual rate of population growth in 1911-21, 0.3 per cent, the lowest since the era of census-taking in the island. Indeed, despite the remarkable rise in emigration in 1955, the fact that it is only 43 per cent of the natural increase means that in one sense its effects on population growth are much less than the effects of similar movements during 1911-21.

The age-sex composition of the emigration is of especial importance as it determines largely the way in which the island's population is affected by

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this movement. The composition of the emigration stream during 1953-55 is shown in Table 5C., while Table 5D. shows the relevant sex ratios. Though by definition these emigrants include not only persons leaving the island in search of work but also all others emigrating permanently, only very small proportions of the latter are involved. Thus in 1953 only 3.5 per cent of the male and 8.8 per cent of the female emigrants declared that they were leaving permanently for some purpose other than to seek employment, while in 1955 these proportions fell to 1.5 per cent and 4.1 per cent respectively. In effect, the composition of the emigrant stream revealed by Table 5C. applies also to the stream of emigrants going to the United Kingdom and elsewhere in search of work, the effects of which will be considered in Chapter 6.

TABLE 5C. GROSS EMIGRATION FROM JAMAICA 1953-55

Age Group	Male				Female			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
Under 10	28	59	83	170	29	67	109	205
10 -	15	29	42	86	19	28	51	98
15 -	94	298	530	922	120	243	508	871
20 -	396	1,215	2,335	3,946	304	691	1,533	2,528
25 -	478	1,375	2,839	4,692	325	817	1,593	2,735
30 -	456	1,168	2,104	3,728	273	633	1,225	2,131
35 -	317	787	1,501	2,605	189	473	847	1,509
40 -	187	587	1,111	1,885	141	352	612	1,105
45 -	111	345	706	1,162	94	211	347	652
50 -	44	196	322	562	53	102	178	333
55 -	23	72	133	228	45	49	84	178
60 -	14	27	49	90	24	26	27	77
65 +	11	17	26	54	22	19	28	69
All ages	2,174	6,175	11,781	20,130	1,638	3,711	7,142	12,491

TABLE 5D. SEX RATIOS (MALES PER 1,000 FEMALES) AMONG EMIGRANTS FROM JAMAICA

Age Group	1953	1954	1955
Under 20	815	1,142	981
20 -	1,303	1,758	1,523
25 -	1,471	1,683	1,782
30 -	1,670	1,845	1,718
35 -	1,677	1,664	1,772
40 -	1,326	1,668	1,815
45 -	1,181	1,635	2,035
50 -	830	1,922	1,809
55 -	511	1,469	1,583
60 +	543	978	1,364
All ages	1,327	1,664	1,650

As has already been shown, the movement is one consisting largely of males. Thus the overall sex ratios were 1,330 in 1953, 1,660 in 1954 and 1,650 in 1955. In 1953 the greatest excess of males was found in the age group 35-40; here the sex ratio was 1,680. In 1954 the greatest ratio (1,840) was that within the age group 30-34, while the maximum excess of males in 1955 was at a higher age - 2,040 in the age group 45-49. The changes in the sex ratios and in particular the increases at higher ages in 1955 suggest slight al-

terations in the age distributions of the two sexes, and this in fact is evident from the age data. Thus the average age of male emigrants remained virtually unchanged throughout the period, being 32.0 years in 1953, 32.1 in 1954 and 32.0 in 1955. On the other hand the average age of female emigrants declined from 32.7 years in 1953, to 31.9 in 1954 and to 31.1 in 1955. Both sexes show the greatest number in the age groups 25-29. The proportion of emigrants in this age group remains almost unchanged during the three-year period ranging from 22 per cent to 24 per cent among the males, and standing at about 22 per cent in all three years in the case of the females. It is interesting to note that most of the emigrants are between the ages of 20 and 39. Over the whole three year period 74 per cent of the males and 71 per cent of the females fall within this range.

Though in progress for only three years and attaining substantial dimensions only during the latter half of this period, emigration has nevertheless had some noticeable effects on the size and composition of part of the island's population. Estimates of the population within the ages 15 to 64, within which virtually all the emigration has taken place, are given in Table 5E.^a As is to be expected from the fact that the movement is predominantly composed of males the effects are most marked on the population of this sex. Between the ages 30 and 44 each age group of the males shows a decline; this is most marked in the group 30-34, where the reduction is from 47,600 to 45,700 or 4 per cent. Outside this range, where emigration is of little consequence, the increase in the age groups has continued. As a result of these changes the proportion of the population falling within the ages 30-39 has declined noticeably, whereas the proportion outside this range has increased. The effects on the female population are on the other hand very

TABLE 5E. ESTIMATES OF END-OF-YEAR POPULATION AGED 15-64, 1953-55

Age Group	Male			Female		
	1953	1954	1955	1953	1954	1955
15 -	72,700	73,700	74,400	72,100	73,000	73,800
20 -	68,300	68,800	68,200	67,700	68,300	68,200
25 -	52,600	53,500	52,900	57,200	57,600	57,300
30 -	47,600	47,000	45,700	56,200	55,700	54,700
35 -	46,700	46,200	45,000	54,300	54,500	54,300
40 -	41,900	42,100	41,600	45,500	46,500	47,200
45 -	36,200	36,700	36,700	38,100	39,000	39,700
50 -	31,000	31,800	32,400	32,000	33,100	34,000
55 -	21,200	22,400	23,500	22,800	23,900	25,000
60 -	14,700	15,300	16,000	17,900	18,400	19,000
Total (15-64)	432,900	437,500	436,400	463,800	470,000	473,200

^aThe population estimates used here are built up on the basis of mortality according to the 1953-54 life table, migration and the ageing of the population. The method is basically the same as that used to derive estimates of the labour force, given in the Appendix, except that, in estimating the population, accessions and retirements are not involved. The Registrar General's estimate for 1952 is taken as the initial age distribution. As this may be subject to change, and as the method used here may not correspond with that used by the Registrar General, the population estimates used in this study (which cover only ages 15-64) may differ slightly from those to be published by him.

small. In fact the only age group which has decreased during the period is that aged 30-34, which fell by about 3 per cent between 1953 and 1955.

From the standpoint of population growth it is clear that, potentially at least, the effects of emigration are appreciable. Its most obvious and immediate result, its tendency to reduce the size of the population, has already been indicated. It also has another aspect, for it means a loss of births to the population. In order to estimate such losses some assumptions must be made about the fertility experience of the emigrants. Manifestly these may have a higher fertility than the population at large, though there are no means of determining the fertility of such groups. In the present context it is simply assumed that the fertility rates of the population as a whole applied to the number of emigrants furnish an estimate of the number of births "lost" to the population. These are 270 in 1953, 720 in 1954 and 1,400 in 1955. These "losses" have no appreciable effects on fertility; despite the high level of migration in 1955, the number of births (55,900) is 2,300 more than in 1954, and by far the highest ever recorded in the island. Indeed since only 74 births per 1,000 emigrants are "lost" to the island a much higher level of emigration would be necessary to induce any marked effects on levels of fertility.

The foregoing considerations however convey an inadequate and uncoordinated approach to the question of the impact of emigration on population growth; it is in fact essential to attempt to assess the implications of emigration in terms of its effects on the capacity of the island's population to reproduce itself. The inter-relationship between emigration and reproduction is best brought out by treating the former as a source of decrement, as in fact complementary to mortality. In short, it is necessary to consider replacement rates, in the computation of which emigration appears as a source of decrement.^a

Throughout this study the mortality used for the construction of reproduction rates (and for all other purposes) is that of the life table based on the Registrar General's provisional end-of-year population for 1953 and on the mortality of 1953 and 1954, while the fertility level is that based on the same population and on the births of 1953 and 1954, and on the age specific fertility rates of 1951. The life tables of this date show an average length of life of 58.7 years for males and 62.0 years for females. On the basis of the mortality and fertility rates of 1953-54 the reproduction rates of this date shown in Table 5F. are obtained. These indicate fertility sufficiently high and mortality sufficiently low to result in extremely high rates of growth. Indeed on this basis a population increase of over 80 per cent in a generation is indicated. This is much higher than the level of reproduction prevailing in the past. For instance the corresponding net reproduction rate for 1921 (1.45) is 20 per cent lower than that of 1953-54.

In order to introduce emigration into the picture of reproduction it is necessary to construct decrement tables, based on rates of mortality and of emigra-

^aOn this point see Hannes Hyrenius (6).

TABLE 5F. GROSS AND NET REPRODUCTION RATES, 1953-54.

Sex	G.R.R.	N.R.R.	Intrinsic Rate of Growth
Male	2.73	2.02	2.1
Female	2.12	1.67	1.9
Both sexes	2.38	1.82	2.0

tion. For several reasons it is most appropriate and convenient to develop such computations for both sexes, and two tables of this kind are used, one based on the 1953-54 mortality and on the emigration of 1954, and the other based on the same mortality and on the emigration of 1955. The mean population of both sexes for each year, and deaths and the migration in the respective years are used to calculate dependent probabilities of decrement.^a Thus if the deaths, emigration and population for a given 5-year age group are taken as, say, D , E and P respectively, and if the probability of a person aged x emigrating within five years is E'' then

$${}_5^x E'' = \frac{5E}{P + 2.5(E + D)}$$

And similarly if the probability of decrement through deaths and emigration is Q'' then

$${}_5^x Q'' = \frac{5D}{P + 2.5(E + D)}$$

and the total probability of decrement through deaths and emigration is

$${}_5^x E'' + {}_5^x Q''$$

The double decrement table for 1955 is given in Table 5G.

TABLE 5G. DECREMENT TABLE FOR BOTH SEXES, BASED ON MORTALITY OF 1953-54 AND EMIGRATION OF 1955.

Age Interval	Survivors	Source of Decrement			Quinquennial Probability of Decrements due to:		
		Mortality	Emigration	All Sources	Mortality	Emigration	All Sources
15 - 20	10,000	79	438	517	.0078	.0438	.0517
20 - 25	9,483	131	1,248	1,379	.0138	.1316	.1454
25 - 30	8,104	128	1,463	1,591	.0158	.1806	.1964
30 - 35	6,513	112	974	1,086	.0172	.1496	.1668
35 - 40	5,427	105	595	700	.0192	.1097	.1289
40 - 45	4,727	157	429	586	.0332	.0908	.1240
45 - 50	4,141	178	271	449	.0429	.0655	.1084
50 - 55	3,692	194	134	328	.0526	.0363	.0890
55 - 60	3,364	285	73	358	.0848	.0216	.1064
60 - 65	3,006	341	31	372	.1135	.0103	.1238
65 - 70	2,634	—	—	—	—	—	—

The dominant factor of the decrement table for 1955 is manifestly the effective way in which it depicts the influence of the decrements due to emi-

^aThe small immigration recorded in 1954 and 1955 is not taken into account here, though both immigration and emigration are of course involved in the estimation of the mean populations used.

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gration. From age 15 to age 50 emigration is by far the most important source of loss to the population. In fact the probabilities of emigration are, for many age intervals, more than ten times those of mortality. The chance of emigration increases from 44 per 1,000 in the interval 15-20 to a maximum of 181 per 1,000 in the interval 25-30; it then declines steadily, but up to the interval 45-50, when it amounts to 65 per 1,000, is still in excess of the chances of dying. As a consequence of the level and pattern of decrement due to emigration this source of decrement dominates the overall chances of decrement, as the table clearly indicates. The maximum probability of decrement (196 per 1,000) falls within the age interval 25-30, and with the decline in the chances of emigration, these also decline until the age interval 50-55 when, because of the rising probabilities of death, overall decrements commence to rise. The column of survivors is also of interest. Thus a cohort of 10,000, coming under observation at age 15, is by age 25 reduced by 19 per cent, while by age 45 only 41 per cent remain. That the chief impact of emigration occurs at a lower age than the impact of deaths within the age range considered is clear from the fact that the average age of decrements due to emigration is 30.8 years, which is 15 years lower than the average age of decrements due to deaths (45.9 years).

The contribution of each person to the reproductive performance of the population under these conditions of decrements is well brought out by the average number of years lived by a new-born infant between the ages of reproduction, 15-55. The values for the double decrement tables of 1954 and 1955 are compared with the corresponding values for the life table for both sexes of 1953-54 in Table 5H. According to the life table a new-born child can expect to live 32.9 years in the reproductive period, that is about 82 per cent of the maximum possible on the assumption that no deaths occur between 15 and 55. When emigration is brought into the picture the value falls steeply. Thus the emigration of 1954 induces a fall to 26.2 years, that is 20 per cent less than the value based on mortality alone. At the level of emigration prevailing in 1955 the average years lived in the reproductive period by a new-born infant decline to 21.5 or 35 per cent lower than the life table value. It is interesting to note that most of this reduction is effected between the ages 35 and 55. Thus whereas the years lived between 15 and 35 in 1955 (14.0) constitute a reduction from the life table value of 19 per cent, the period lived in the interval 35-55 for 1955 (7.5) is only about half of the corresponding life table value. This has important implications in respect of

TABLE 5H. AVERAGE NUMBER OF YEARS LIVED IN THE REPRODUCTIVE PERIOD BY A NEW-BORN INFANT ACCORDING TO LIFE TABLES OF 1953-54, AND DOUBLE DECREMENT TABLES OF 1954 AND 1955

Age Interval	According to Life Table	According to Double Decrement Table	
		1954	1955
15 - 35	17.2	15.5	14.0
35 - 55	15.7	10.7	7.5
15 - 55	32.9	26.2	21.5

the impact of emigration on replacement, since the full effects of emigration are felt in the ages above those of highest fertility.

An important use to which the decrement table can be put is the derivation of replacement rates. Such rates based on the mortality and fertility of 1953-54 and on the emigration at the rates prevailing in 1954 and 1955, are compared in Table 5I. It is at once evident that when emigration is introduced as an element of decrement in the pattern of reproduction, the latter is appreciably diminished. Thus in 1954 the replacement rate is 1.66 which is 9 per cent below the level of the N. R. R.^a of 1953-54. More pronounced is the reduction in the rate caused by the much higher emigration of 1955; here the rate stands at 1.41, which is 23 per cent lower than the level of reproduction exclusive of emigration. The resulting true annual rates of growth also undergo important changes. Thus the annual rate for 1954 (1.7 per cent) is 15 per cent lower than the rate based on mortality alone, while that for 1955 (1.2 per cent) is 40 per cent lower. (There is, it should be noted, a small decline in the average length of a generation resulting from changes in the age distributions of parents in the stationary populations, but this does not contribute much to the movements in the true annual rates of growth). It is thus established that emigration, continued at the level of 1955 over a long period of time, can have definite effects on the rates of reproduction; but the rate still shows that on these terms an increase of about 40 per cent in a generation is to be expected.

TABLE 5I. REPRODUCTION RATES AND REPLACEMENT RATES

Period	Reproduction and Replacement Rates	Index of Rates	Intrinsic Growth Rates	Index of Intrinsic Rates
1953 - 54	1.82	100.0	2.0	100.0
1954	1.66	91.2	1.7	85.0
1955	1.41	77.5	1.2	60.0

Note: Values for 1953-4 are based on decrements due to mortality alone, while those for later years are based on mortality and emigration. The same fertility is assumed throughout.

In view of the reduction of the rates of replacement caused by emigration, it is instructive to compare the rates of emigration with fertility rates for both sexes. These are shown in Table 5J. The great excess of fertility rates over the emigration rates of 1955 emphasizes that the levels of emigration of 1955 cannot introduce any drastic declines in replacement levels. For throughout the important age span 15-39, where most of the fertility performance of the population is concentrated, there is a vast superiority of fertility rates over rates of emigration. If, however, a pronounced fall in the average age of emigrants takes place, if for instance the age groups 15-19 and 20-25 become more heavily involved in the external movement, the reduction in the level of replacement will be much more conspicuous.

The foregoing approach has been framed in terms of the conventional analysis of replacement, in which three components of growth are involved, two of decrement and one of increment. This approach, predicated on the assump-

^aN.R.R. = net reproduction rate.

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TABLE 5J. FERTILITY RATES AND RATES OF EMIGRATION PER 1,000
POPULATION (BOTH SEXES)

Age Group	Fertility Rates, Both Sexes, 1951	Rates of Emigration	
		1954	1955
15 —	28.8	3.7	7.0
20 —	92.3	14.0	28.4
25 —	108.8	19.8	40.1
30 —	86.9	17.4	32.6
35 —	60.0	12.5	23.5
40 —	44.3	10.7	19.4
45 —	19.6	7.4	13.9
50 —	11.8	4.7	7.6

tion of the long continuance of given levels of decrement, is subject to severe limitations in view of the highly improbable situation of a long persistence of these rates. Almost inevitably one of the components will experience some change and thus disturb the procession to the postulated state of stability. Even if the wholly artificial assumption is accepted that emigration remains constant, this does not mean that no changes in fertility and mortality can be expected. Indeed it is strongly held by many demographers that the very fact that the constant emigration takes place will help to maintain growth rates. This whole subject will be considered further in discussions in the concluding chapter.

CHAPTER 6

EFFECTS OF MIGRATION ON THE LABOUR FORCE

The decrements to the island's labour force resulting from emigration and the increments accruing as a result of immigration have already been considered in terms of absolute numbers and proportional distributions. These two aspects, instructive though they are in showing the dimensions of the movement and its increase between 1953 and 1955, fail to give any indication of the gain or loss experienced by each occupational class as a consequence of migration. Closer analysis of the effects must be made by relating both the immigration and the emigration to estimates of the numbers within the several occupational classes of the labour force distinguished for the purpose of this study, and rates of emigration must be calculated for each occupational class.

As in the previous chapter, some consideration must be given to the meaning of the terms emigration and immigration in the present context. It seems appropriate to adopt an approach differing somewhat from that used in the previous chapter, though once more it is the declarations of the purpose of visit and of proposed length of stay that determine whether or not a migrant is, for the purpose of this chapter, accepted as a decrement or an increment to the island's labour force. Additions to the labour force from immigration cover all persons declaring that they are entering the island for gainful employment, whether or not they state their normal occupation. Losses to the labour force from emigration cover all nationals and alien residents declaring that they are leaving the island to seek permanent employment abroad, whether or not they declare themselves to be in the island's labour force at the time of their departure. It must be stressed that all departures in search of work and not only those going to the United Kingdom are treated here, and similarly arrivals from all countries in search of work are covered

In order to arrive at estimates of the numbers of workers in the several occupational classes of the labour force during 1953-55, the data of the 1943 census are used. The preliminary occupational breakdowns of the 1953 Population Survey available at the time when work on this study was in progress did not lend themselves to easy condensation into the 18 classes delineated.

The occupational distribution used here was obtained by regrouping the classes of Tables 88, 89, 106, 107, 108, 109, 110 and 111 of the 1943 census report.^a The proportions gainfully occupied, derived from the 1943 census, are as follows:-

^aIn accordance with the procedure adopted in the 1946 West Indian Census Report the domestic (personal) class is taken as the personal service class exclusive of unpaid domestic servants.

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Age Group	Male	Female
15—	.554	.295
20—	.851	.444
25—	.944	.457
30—	.962	.441
35—	.965	.436
40—	.959	.436
50—	.928	.405
60—	.817	.296
70+	.545	.148

There were small numbers gainfully employed under age 15 in 1943 but in general these are not considered here, as in the present analysis the initial age in the labour force is taken as age 15. In the attempts to estimate the labour force by age groups, however, account will be taken of the small numbers estimated to be age 14 (See the appendix). The proportional distributions for the several occupational classes thus derived were applied to the Registrar General's end-of-year population for 1952 and estimates of the numbers in the various occupational classes at this date derived.

It will be appreciated that for the present purpose it is unnecessary to seek to determine precise estimates of the size of the different occupational classes of the labour force. Despite the weakness of the assumption of constant participation for many classes between 1943 and 1953 the present method, it is considered, yields estimates in most cases sufficiently reliable for the purpose of illustrating the changes in the rates of loss due to emigration between 1953 and 1955, and other aspects of the influence of this movement.

Application of the rates of labour force participation to estimates of the population based on ageing and mortality alone (that is on the assumption that no migration takes place) suggests that the male labour force is growing at an annual rate of 2.4 per cent and the female labour force at the rate of 2.0 per cent. If therefore we apply these rates of increase to each occupational class as estimated at the end of 1952, we obtain estimates of the numbers engaged in these classes at the end of 1953, on the assumption that no migration takes place, and that each occupational class shows the same annual rate of growth. In effect also it is assumed that all occupational classes experience the same rate of accession. By subtracting the emigrants leaving the island in search of work, tabulated by occupational class, and adding the corresponding permanent additions to the labour force resulting from immigration, we obtain estimates of the numbers engaged in each occupational class at the end of 1953. By means of the same process estimates of the numbers at the end of 1954 and 1955 can be made. The averages from the end-of-year estimates for 1952 to 1955 can be used to derive rates of immigration and rates of emigration for the three years 1953-55.

Rates of Male Emigration

The rates of emigration for the male labour force are by far the most important, and these, presented in Table 6A, are analysed first.

TABLE 6A. RATES OF EMIGRATION PER 1,000 GAINFULLY OCCUPIED MALES BY OCCUPATIONAL CLASS 1953-55

Occupational Class	1953	1954	1955
01 Planters	0.2	0.3	0.2
02 Farm Workers	2.1	6.3	20.4
03 Carpenters	18.5	67.5	113.0
04 Masons	23.6	108.3	210.6
05 Mechanics etc.	27.3	93.5	183.3
06 Other Skilled Workers	9.1	26.7	49.6
07 Unskilled Labourers	2.2	5.0	12.5
08 Clerks, etc.	13.6	29.8	47.1
09 Senior Persons in Trade	7.2	12.2	23.3
10 Executives and Managers	11.3	8.7	16.1
11 Domestic Workers	3.7	11.0	18.9
12 Personal Service Employees	13.9	40.2	48.8
13 Tailors	15.8	43.1	79.1
15 Teachers	7.6	19.4	34.7
16 Civil Servants	16.6	26.4	36.3
17 Professionals	27.0	43.6	38.2
18 Others	10.0	17.0	15.9

Note: Complete descriptions of the occupational codes are given in the appendix.

These rates emphasize more clearly than do the absolute numbers the extent to which emigration has resulted in decrements to the skilled sectors of the labour force. In the initial year 1953, when emigration to the United Kingdom on a substantial scale was just beginning, the rates of emigration were highest among mechanics, electricians, etc. (27 per 1,000), masons (24 per 1,000) and carpenters (19 per 1,000). Substantial rates of emigration were also experienced by tailors (16) and by the miscellaneous group of skilled and semi-skilled workers designated code 06 (9). Rates of emigration among the unskilled were in general much lower, being above 10 only in the case of the personal service class, which showed a rate of 14. The relatively high rate recorded for the professional workers (27) should be noted, though this had not the same significance as the rates experienced by the skilled workers. The evidence is that, unlike the skilled workers, who continue to be recruited largely from the native population, professional and other highly qualified personnel are largely recruited from abroad. They move into and out of the island quite frequently, though, as will be seen presently, the balance is definitely one of a gain to the island.

The effect of the rise in emigration in 1954 on the rates of the skilled workers is immediately evident. Masons experience a rate of emigration of 108 per 1,000, while mechanics, electricians, etc., experience a rate of 94. Carpenters also show a very high rate (68), while the rate for tailors (43) is nearly three times that of 1953. The miscellaneous class of skilled and semi-skilled workers of code 03 also show a rate higher than that of the previous year (27). Though the rates applicable to the unskilled class remain in general lower than those applicable to the skilled, the former also are in excess of the rates prevailing in 1953. This is most marked in the case of personal service workers, for whom the rate rose from 14 in 1953 to 40 in 1954. Apart from the skilled and unskilled workers, increasing rates of emigration were

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in evidence in other classes, notably among lower grade commercial workers of code 08, where it rose from 14 to 30, and the higher grade commercial workers of code 09, who experienced a rate of emigration of 12 per 1,000 in 1954. It should be noted that all but four of the occupational classes of 1954 showed rates of emigration in excess of 10.

The greatly augmented emigration witnessed in 1955 again affects mostly the skilled classes. Masons once more show the highest loss, the rate of loss through emigration being considerably higher than that of any other class (211). Clearly a movement which in one year depleted this class by one fifth must have appreciable effects on the building trade in general. The rate of loss experienced by mechanics, electricians, etc., is about twice as high as in 1954, reaching 183, while the rates experienced by carpenters (113) is once more substantially in excess of the rate of 1954. Nearly 8 per cent of the tailors in the island emigrated in 1955, while the other class of skilled and semi-skilled workers (code 06) showed a rate of emigration of 50 per 1,000. Though in terms of absolute numbers the increases in emigration among the unskilled workers between 1954 and 1955 are striking, the rates of loss experienced by the unskilled remained in 1955 substantially less than the loss of the skilled. Rates amounted to 49 per 1,000 among the personal service workers, 19 among the domestic workers and 20 among farm workers. Most of the other classes showed increased rates of emigration. In fact with the exception of the indefinite class code 01, all showed rates in excess of 10.

Rates of emigration of the magnitude experienced during the years 1953-55 are such as to induce declines in the numbers of some of the skilled occupational classes in the island. Despite the limitations attaching to the estimated numbers in the skilled class, which rest on the assumption of constant rates of participation between 1943 and 1953, the estimates used here probably suffice to show roughly the extent to which emigration offsets the recruitment to the ranks of these categories. Thus on the basis of the present estimates the number of masons decline by 16 per cent as a result of external migration between 1953 and 1955. Mechanics, electricians, etc. experienced a reduction of 13 per cent over the same period; carpenters show a decline of 8 per cent. The reduction in the skilled workers contrasts with the small increases in the unskilled, which in terms of absolute numbers are affected by external migration to a much smaller extent. Thus according to the present estimates the number of workers in agriculture rises by 3 per cent between 1953 and 1955, while the category of general unskilled workers increases by 4 per cent in the period.

Emigration and Accessions to the Male Labour Force

Since emigration constitutes in effect a type of separation from or decrement to the labour force, it would be an advantage if it could be compared with estimates of the numbers entering the labour force during 1953-55. Such considerations must unfortunately be limited to the males as the pattern of female participation in the labour force does not lend itself to the deriv-

ation of simple estimates of accession. For the purpose of these estimates it is convenient to use the broad division into three groups already indicated: skilled, unskilled and the remainder. As before, the skilled is taken to include five occupational classes, codes 03, 04, 05, 06 and 13, while the unskilled covers four classes, codes 02, 07, 11 and 12. The residual group covers the codes falling outside the skilled and unskilled categories.

There are no direct estimates of numbers recruited to the labour force annually, but crude measures of this nature, applicable to the period 1953-55, can be obtained from the rates of participation for these groups derived from the 1943 census data. The curves of these rates, smoothed graphically, form the basis of estimates of accession as well as of retirement. The method of deriving retirements will be outlined later; here only the method of deriving the rates of accession is considered. These rates are merely one-fifth of the first differences of the rates of participation for the several five-year age groups from age 15 to age 40. Three curves are considered: those of the skilled, the unskilled and the total labour force. The resulting rates, applied to the mean population estimates, give approximations to the numbers of accessions during the period, and both of these estimates are given in Table 6B.

TABLE 6B. ESTIMATES OF RATES OF ACCESSION AND OF NUMBERS OF ACCESSIONS TO THE MALE LABOUR FORCE 1953-55

Age Groups	Skilled	Unskilled	Other	All Classes
	Rates of Accession per 1,000 male population			
15 - 19	21	81	—	110
20 - 24	15	18	—	59
25 - 29	6	1	—	16
30 - 34	1	—	—	5
35 - 40	—	—	—	3
	Accession to the Labour Force.			
15 - 19	1,600	6,020	550	8,170
20 - 24	1,030	1,200	1,690	3,920
25 - 29	320	80	460	860
30 - 34	40	—	200	240
35 - 40	—	—	140	140
Total	2,990	7,300	3,040	13,330

Note: Rates of accession have not been calculated for the other classes; the accessions to this group are derived by subtracting the estimate of the skilled and unskilled from the total. Accessions represent averages for the three-year period.

Evidently the loss to the labour force caused by emigration should be compared with the accessions. In the case of the skilled classes the emigration of 1953 (1,150) accounted for 38 per cent of the total accessions. In 1954 emigration of skilled workers stood at 3,800, which exceeded the estimated number of accessions. In 1955 the loss of skilled workers through emigration (6,560) was more than twice the number of accessions to the ranks of these workers. Even when allowance is made for the deficiencies in the present estimates the evidence confirms what has already been shown by the rates of emigration, that the impact of the movement on the skilled classes is profound.

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In terms of the relationship between accessions and emigration the unskilled group is much less affected. In 1953 the total emigration of unskilled workers (460) was only 6 per cent of the overall accessions to these groups, while in 1954 the total loss of 1,300 had risen to 18 per cent of the accessions. The greatly augmented emigration of 1955 (3,730) amounted to about half of the total unskilled accessions.

Though emigration has affected the residual group of the labour force to an increasing extent, here also it is of much smaller consequence than in the case of the skilled workers when related to the annual number of accessions. Thus in 1953 the emigration (480) was only 16 per cent of the estimated accessions. Emigration in 1954, at a level of 940, amounted to nearly one third of the accessions, while in 1955 the loss of 1,320 workers was equivalent to 43 per cent of the annual accessions.

The general relationship between emigration and accessions to the overall male labour force will be taken up at a later stage.

Another important relationship between accessions and emigration is the dimension of emigration within the age span of accession. All three broad divisions of the labour force are influenced by emigration in these age groups. Thus in the case of the skilled, emigrants aged 15-34 totalled 750 in 1953, 2,570 in 1954 and 4,490 in 1955; so that in the first year the loss in this age interval amounted to one quarter of the accessions, while in 1954 it nearly equalled these accessions. By 1955 losses in this age range exceeded accessions by 50 per cent. Though the proportions of skilled emigrants falling within the interval 15-34 ranged from 65 per cent to 68 per cent, the average age of all skilled emigrants, ranging from 30 to 34 years, over the three-year period, is much higher than the average age of accessions to the skilled group, which stands at 20 years. It is thus clear that the skilled workers spend between 10 and 14 years in the island's labour force before emigrating.

Unskilled workers also experience appreciable losses within the age interval of accession, but these are much less marked than in the case of the skilled. Thus within the age interval of accessions (15-30) emigration amounted to 190 in 1953, 490 in 1954 and 1,580 in 1955. Moreover the proportions within the age range of accession are much lower than in the case of the skilled, lying between 38 per cent and 42 per cent. The average age of accessions to the unskilled group is, as is to be expected, lower than in the case of the skilled (18.4) and as the average age of the unskilled emigrants does not depart much from 33 years it can be concluded that the average unskilled worker who emigrates spends about 15 years in the island's labour force before doing so.

Rates of Male Immigration

As can be seen from the rates of immigration in Table 6C., this movement plays a part differing markedly from emigration in its effects on the island's labour force. Its contribution to the ranks of the skilled and unskilled are very small, while, again in contrast to the pattern of emigration, it shows

no definite changes in dimension between 1953 and 1955. Among the classes of the skilled and unskilled male workers, the only one which experiences sensible additions from immigration is that covering mechanics, electricians, etc.; but the rates of immigration here, 5 per 1,000 in 1953, 2 in 1954 and 8 in 1955, are much too low to offset to any degree the strong rates of emigration shown by these. Among the more highly placed personnel however immigration contributes significantly to recruitment. The highest rates of immigration appear among the professional class: here the rates range from 70 to 79 per 1,000. So that though rates of emigration among this class are appreciable, ranging from 27 in 1953 to 44 in 1954, net accessions to the extent of between 3 per cent and 5 per cent per year are registered. Recruitment to the ranks of executives and other highly placed persons in commerce and industry is also largely effected by immigration; rates here range from 38 to 50, and again net rates of accession of between 2 per cent and 4 per cent are in evidence. The difficulties of measuring rates of migration affecting civil servants are obvious; for instance many professionals are in fact civil servants though in the migration statistics this distinction cannot be drawn. Even more difficult is the task of estimating the numbers of civil servants in the island. It remains clear however that there is some immigration, at a rate of about 10 per cent, though this is probably not sufficient to offset the rate of emigration, which in 1955 was as high as 36 per 1,000.

TABLE 6C. RATES OF IMMIGRATION PER 1,000 GAINFULLY OCCUPIED MALES
BY OCCUPATIONAL CLASS, 1953-55

Occupational Class	1953	1954	1955
01 Planters	0.0	0.1	0.0
02 Farm Workers	0.0	—	0.0
03 Carpenters	0.5	0.2	0.9
04 Masons	1.1	—	0.6
05 Mechanics, etc.	5.0	2.4	8.1
06 Other Skilled Workers	1.1	1.1	1.7
07 Unskilled Labourers	0.1	0.1	0.1
08 Clerks, etc.	3.0	2.2	1.0
09 Senior Persons in Trade, etc.	5.2	4.1	5.3
10 Executives and Managers	50.4	40.0	38.1
11 Domestic Workers	1.0	0.9	1.1
12 Personal Service Employees	4.2	0.7	0.7
13 Tailors	—	0.0	0.4
15 Teachers	6.8	11.2	13.3
16 Civil Servants	14.0	11.3	10.0
17 Professionals	79.3	70.6	79.3
18 Others	8.7	7.8	9.5

Whereas emigration represents, in the present context, the extent to which, in part at least, locally recruited workers are lost to the labour force, immigration constitutes a genuine addition to the process of the normal recruitment of local workers. In the case of the unskilled division of the labour force, the additions are negligible, while in the case of the skilled the immigration, ranging from 70 to 170, is again too small to be of much consequence. For the other divisions however, emigration, which ranges from 450 to 410,

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amounts to about 14 per cent of the estimated annual accessions to these, and so does augment the latter appreciably.

Rates of Female Emigration and Immigration

As is to be expected, efforts to assess the effects of emigration on the female sector of the labour force are less rewarding than those applied in the case of the males, and in general are subject to much greater error. In particular the assumption of the constancy of rates of participation between 1943 and 1953 would seem to be less justifiable than the similar assumption in the case of the males. The rates of immigration and emigration are shown in Table 6D.

TABLE 6D. RATES OF EMIGRATION AND IMMIGRATION PER 1,000 GAINFULLY OCCUPIED FEMALES BY OCCUPATIONAL CLASS, 1953-55

Occupational Class	Rates of Emigration			Rates of Immigration		
	1953	1954	1955	1953	1954	1955
02 Farm Workers	0.0	0.2	0.4	—	—	—
06 Other Skilled Workers	1.1	3.1	5.9	0.1	0.1	0.2
07 Unskilled Labourers	0.6	1.1	2.9	—	—	0.1
08 Clerks, etc.	21.2	44.5	71.6	2.4	3.5	3.4
09 Senior Persons in Trade etc.	4.0	15.4	25.9	0.9	0.9	0.9
10 Executives and Managers	9.4	9.2	9.0	7.1	9.2	4.5
11 Domestic Workers	3.6	7.7	21.6	0.5	0.1	0.3
12 Personal Service Employees	9.9	25.6	41.4	0.4	0.2	0.7
13 Dressmakers	24.3	75.5	149.8	0.3	0.3	0.4
14 Nurses	38.0	59.2	77.5	6.5	9.2	5.3
15 Teachers	17.9	26.2	44.0	7.6	7.2	6.1
17 Professionals	60.9	47.2	58.4	173.9	102.4	116.8
18 Others	22.3	33.4	42.9	50.2	53.5	41.6

It is clear that a pattern differing completely from the experience of the males emerges from the female rates of emigration and immigration. In 1953 the highest rate of emigration, 61 per 1,000, was shown by the professional class, while second in magnitude was the rate for the nurses (38). Three other classes show rates in excess of 20: the miscellaneous collection of workers of code 18 (22), secretarial and similar workers of code 08 (21), and the class termed dressmakers (24). All these rates, it is of interest to note, exceed the corresponding rates for the males in 1953.

The increased scale of emigration in 1954 was evidently most felt among the dressmakers; here the rate of emigration rose from 24 to 76, and this constituted the highest rate for 1954. Nurses again experienced a high rate of emigration (59), while the third highest rate was that for the professional class (47). The rate of loss by secretarial and similar workers of code 08 increased to 45, while the rate of code 18 rose to 33 and that for teachers to 26. Again the rates for the foregoing classes of females exceeded the corresponding rates for the males.

It was among dressmakers that the increase in rates of migration in 1955 was most pronounced; here the rate increased to 150 per 1,000, or about

double what it was in 1954. Second in magnitude was the rate of emigration among the nurses (77), while rates affecting the professional classes and teachers, 58 and 44 respectively, were markedly in excess of the rates of 1954. As before, all of these rates exceeded the corresponding values for the males in 1955.

It is not possible to state, as was done in the case of males, the effects of migration on the skilled and unskilled sectors of the female labour force. The group which was most depleted by the movement, dressmakers, is a borderline class, which does not definitely fall within the skilled category.^a The effects of emigration among the females must therefore depend largely on the degree of skill accredited to this broad group.

The evidence is that, according to the present estimates of gainfully employed females, emigration prevailing during 1953-55 suffices to induce some declines in the numbers. Thus it appears that over the three years the number of dressmakers was, as a consequence of emigration, reduced by 11 per cent. Secretarial and similar workers of code 08 were, it is estimated, reduced by 4 per cent as a result of emigration, while nurses and teachers also experienced small reductions over the period. However the tenuous nature of the estimates of nurses, secretaries, teachers, and similar occupational classes resulting from the present approach must be again emphasized.

Only two occupational classes of females experienced any appreciable rate of immigration. Professional workers showed very high rates, 174 in 1953, 102 in 1954 and 117 in 1955. So that though there was a substantial rate of emigration in this category it continues to be recruited to an appreciable extent by immigration. Similarly the miscellaneous group of highly placed workers included under code 18 experienced appreciable rates of immigration, ranging from 42 to 54, and here also these to some extent help to offset the fairly high rates of emigration experienced.

General Effects of Migration on the Labour Force

The effects of emigration and immigration on the island's labour force as a whole must now be assessed. The overall rates of emigration and immigration are presented in Table 6E. The losses experienced rise steeply in both sexes and are of approximately equal levels for both. The male rates increase from 5.4 per 1,000 in 1953 to 15.4 in 1954 and to 29.4 in 1955; these are close to the female rates: 5.8, 14.3 and 27.2 respectively. By contrast, rates of immigration are very low and do not vary much from year to year. The rates for the males range from 1.3 to 1.6 and are considerably more than the rates affecting females, which lie between 0.7 and 0.8 per 1,000. As a result of migration therefore the island's labour force experiences net losses which since 1954 have been appreciable. Among the males, losses of 14 per 1,000

^aThe occupational category "dressmaker", as used in the Jamaica censuses, is not a very satisfactory one. Not all women so describing themselves are continuously employed as dressmakers, while there is evidence that the distinction between this category and that of housewife is not always clearly drawn.

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for 1954 and 28 per 1,000 for 1955 have resulted; the corresponding losses for the females in the labour force are of a similar order.

TABLE 6E. RATES OF MIGRATION PER 1,000 PERSONS GAINFULLY OCCUPIED, 1953-1955

Rates of Migration	Males			Females		
	1953	1954	1955	1953	1954	1955
Rates of Emigration	5.42	15.37	29.44	5.76	14.29	27.20
Rates of Immigration	1.52	1.27	1.63	0.77	0.72	0.69
Rates of Net Emigration	3.90	14.10	27.81	4.99	13.57	26.51

The present analysis must however be pushed further in order to assess more critically the effects of mounting emigration on the island's labour force. In the present context emigration constitutes an important source of decrement to the labour force, and it must be related to the other sources of decrement as well as to the sources of increment determining the size of the labour force. These sources of increment and decrement can be divided into five elements. Two of them are increments: accession to the ranks of the labour force as a result of the normal process of recruitment of persons not hitherto employed, which usually takes place within the age span 15-25, and immigration of persons coming to engage in permanent employment in the island. The elements of decrements are deaths among members of the labour force, the retirements from the labour force (these normally commence over 40, but do not attain importance until above age 65), and emigration of persons normally in the island's labour force to seek work abroad. Data on immigration and emigration are available, while estimates of decrements to the labour force resulting from mortality can be readily derived by applying prevailing death rates to the labour force, on the simplifying assumptions that persons in the labour force are subject to the same age-specific mortality rates as persons outside the labour force. It will be recalled that rates of accession have already been derived.

By the approach set out in the appendix, rates of retirement can also be estimated from the schedules of rates of participation in the labour force derived from the 1943 census. These retirement rates are as follows:

Age group	Rate of retirement per 1,000 population
40 - 44	1
45 - 49	2
50 - 54	4
55 - 59	5
60 - 64	10
65 - 69	31

Because of the paucity of the data and the small numbers at higher ages, estimates of retirement, one of the chief sources of decrement to the labour force here, are of little validity and are not used.

A summary of the estimates of the several sources of increment and decrement affecting the male labour force during 1953-55 is given in Table 6F. For the purpose of the present analysis decrements are not considered for ages over 65.

EXTERNAL MIGRATION AFFECTING JAMAICA

TABLE 6F. SUMMARY OF INCREMENTS AND DECREMENTS AFFECTING THE MALE LABOUR FORCE AGED 15-64, 1953-55

Source of Increment or Decrement to Labour Force		1953	1954	1955	1953-55
Increments	Accessions	13,140	13,310	13,380	39,830
	Immigration	570	480	630	1,680
	Total	13,710	13,790	14,010	41,510
Decrements	Deaths	2,490	2,550	2,570	7,610
	Retirement	480	500	520	1,500
	Emigration	2,090	6,030	11,580	19,700
	Total	5,060	9,080	14,670	28,810
Net Gain (+) or Loss (-)		+8,650	+4,710	-660	+12,700
Mean Labour Force, 15-64		371,000	377,000	377,000	-
Rate % of Gain or Loss		+2.3	+1.2	-0.2	-

Accessions to the labour force during 1953-55 range from 13,100 to 13,400 per year, while the small number of immigrants coming into the island as permanent additions to its labour force bring the gross annual increments to about 14,000 per year. Of the three elements of decrement, the only one which changes appreciably is emigration. Whereas losses through deaths amount to approximately 2,500 each year, and losses due to retirement (limited to ages 15-65) remain at about 500 per year, losses due to emigration show that pattern of increase with which we are now familiar. In 1953 emigration was slightly less than deaths (2,100). By 1954 emigration was nearly three times as important as mortality as a source of decrement to the labour force, while by 1955 there were five times as many emigrants as deaths. As a consequence of this rise in emigration the net gain to the labour force which stood at 8,600 in 1953, declined to 4,700 in 1954, and by 1955 such was the level of emigration that it entirely wiped out the increments accruing from accessions and immigration. In fact the total emigration of 11,600 nearly equalled the estimated total accessions (13,400). It is thus manifest that emigration at the level prevailing in 1955 suffices to induce small declines in the size of the labour force, or more precisely, in its most numerous and important portion, falling within the age span 15-64. It appears that the inclusion of the small numbers over 65 would not involve any change in this assessment.

It is clear also that but for emigration during this period there would have been considerable annual increments to the labour force. In fact if movements resulting from migration are ignored completely the increments resulting from accessions to the labour force and the decrements as a result of retirements and deaths yield an annual net addition of about 10,200 per year, which related to estimates of the gainfully employed males between the ages of 15 and 64 suggest an annual rate of increase of 2.7 per cent. On the basis of the present estimates the indicated rates of annual increase experienced by this portion of the labour force however stand at 2.3 per cent in 1953 and at 1.2 per cent in 1954; while the small loss recorded in 1955 is equivalent to a decline of under 0.2 per cent.

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Special Effects of Emigration on the Labour Force

The fact that within three years emigration attained a level sufficient to induce a slight decline in the size of the male labour force warrants the use of a more detailed analysis of the role of emigration as a determinant of the size of the labour force. In particular the question arises, what may be the ultimate consequences of a prolonged emigration at the rates prevailing in 1955?

In the analysis of the effects of emigration on population growth and on reproduction in general, emigration was treated as a source of decrement, acting in conjunction with mortality. On this assumption a double decrement table was constructed, in which the rates of decrement were death rates and rates of emigration. An assessment of the effect of the continuance of rates of decrement of the order of 1955 on population growth in the long run was well summarized in the resulting replacement rate. This in effect showed what would be the rates of growth after the rates of fertility, mortality and emigration had persisted long enough for the population to attain a stable age distribution.

Just as emigration constitutes a source of decrement to the population at large, so also it constitutes an important source of decrement to the island's labour force. And the question therefore arises whether some type of analysis similar to that used to assess the joint effects of emigration and mortality on reproduction of the population as a whole can be used to summarize the influence of emigration on the labour force. In particular what form can a decrement table applicable to the labour force take? Though the analogy between the reproduction of the population as a whole and the replacement of its labour force cannot be too closely pressed, it does seem feasible to construct a decrement table for the labour force. But in addition to the rates of decrement from mortality and emigration, a third source of decrement applicable to the labour force has to be considered, that is the rate of retirement. An analysis of this nature must of necessity be limited to the male sector of the labour force.

In the construction of a table of this nature the assumption is made that all workers enter the labour force at the same age (15), at which age in fact the radix of the table is placed. Entry into the labour force is not, as the present simplifying approach assumes, strictly analogous to a birth process in which entrants into the group are all of the same age, that is the initial or youngest age of the population.^a Entrants into the labour force vary in age from about 15 to 35, though 91 per cent of them are within the age range 15-24. And therefore an appropriate technique would, seemingly, be one which assumes that the entrants do not constitute a simple cohort but are characterized by an age distribution which is a function of the particular age schedule of rates of replacement of the labour force. But nothing of this nature is attempted here.

^aFor approach to these problems see U.S. Bureau of Labour Statistics (26) and Mortimer Spiegelman (22).

Computation of such a table is possible only if estimates of the age distributions of the male labour force can be obtained for the years for which the analysis is to be made. The method of estimating the size of the working population by five-year age groups adopted here consists of carrying forward, one year at a time, the estimates of the labour force at the end of 1952 based on the rates of participation of 1943 and the Registrar General's end-of-year population estimate for 1952. In this process of carrying forward account is taken of accessions to the labour force each year, retirement, mortality, ageing, (that is the movement of persons from one age group to another) and net migration affecting the labour force. Because of the limitations of the data at advanced ages these calculations are not carried beyond age 65. The details of the computations of these estimates are set out in the appendix. The end-of-year estimates for 1952, 1953, 1954, and 1955 when averaged give mean populations on which the decrement table for the labour force can be based. Here however consideration is limited to a table calculated for 1955, the year most heavily influenced by emigration.

The computation of the multiple decrement table for 1955 is set out in Table 6G. Since the mean labour force estimate for 1955 has been derived on the basis of mortality, emigration and retirements, the several types of decrements can be applied to this population immediately to derive dependent rates of decrement. If D , R , E and L represent respectively deaths, retirement, emigration and the labour force in a given five-year age group, the dependent probability of emigration can be written.

$${}_5E''_x = \frac{5(E)}{L + 2.5(D + R + E)}$$

And similarly dependent probabilities of mortality and retirement can be computed. The overall probability of decrement resulting from all these sources is

$${}_5Q''_x = \frac{5(D + R + E)}{L + 2.5(D + R + E)}$$

TABLE 6G. DECREMENT TABLE FOR GAINFULLY OCCUPIED MALES AGED 15-65 BASED ON DECREMENTS DUE TO MORTALITY, EMIGRATION AND RETIREMENT OF 1955

Age Interval	Survivors	Decrements due to				Quinquennial Probabilities of Decrement due to			
		Mortality	Emigration	Retirement	All Sources	Mortality	Emigration	Retirement	All Sources
15-20	10,000	69	603	—	672	.0069	.0604	—	.0672
20-25	9,328	113	1,627	—	1,740	.0121	.1744	—	.1865
25-30	7,588	113	1,870	—	1,983	.0149	.2464	—	.2613
30-35	5,605	99	1,178	—	1,277	.0177	.2102	—	.2279
35-40	4,328	84	667	—	751	.0195	.1541	—	.1736
40-45	3,577	127	450	17	594	.0356	.1257	.0047	.1661
45-50	2,983	139	277	29	445	.0466	.0930	.0096	.1493
50-55	2,538	146	131	52	329	.0575	.0514	.0206	.1296
55-60	2,209	206	65	57	328	.0932	.0294	.0257	.1483
60-65	1,881	241	32	106	379	.1279	.0172	.0562	.2014
65-70	1,502								

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The extent to which emigration dominates the rates of decrement operating on the island's labour force is clearly brought out in this table. At all age intervals up to the age of 45 emigration constitutes the main element of the overall probabilities of decrement. The chances of emigration are many times greater than the chances of death during the age span 15-30, which is also the age span within which accession to the labour force takes place. Emigration is at a maximum within the interval 25-30, when the probability attains a level of 246 per 1,000; for the interval 30-35 it is 210 per 1,000 and then it declines slowly but is still substantial up to the interval 45-50, when it stands at 93 per 1,000. As is to be expected, emigration as a source of decrement is, within the age span here considered, much more potent than retirement, though for the age intervals 60-65 when emigration is no longer at a high level, the rate of retirement exceeds that of emigration.

As a result of the powerful effects of emigration in 1955, the overall probabilities of decrement are very high. The chances of overall separation reach a maximum of 261 per 1,000 within the age interval 25-30, and then decline slowly to 130 per 1,000 within the interval 50-55, as emigration declines in importance. At higher ages, however, when mortality assumes more prominence and retirement commences to be substantial, overall rates of separation rise once more.

The survivors column emphasizes the wastage experienced by a cohort of 10,000 workers exposed to rates of decrement of the order here considered. By age 25, 24 per cent have died or emigrated, while by age 32 only half remain in the labour force. By age 50, 75 per cent have either died, emigrated or retired, while by 65 no less than 85 per cent have been separated from the labour force in one way or another. Of the total decrement of 8,500 experienced by the cohort as it passes from age 15 to age 65, emigration accounts for 6,900 decrements or 81 per cent of the total; deaths account for 1,340 decrements or 16 per cent of the total, while decrements in the form of retirement, numbering 260, account for only 3 per cent of the total. The importance of emigration as a source of decrement is thus clearly brought out. It is also interesting to note that the average age of emigrants is, according to this table, 30 years, which is appreciably lower than the corresponding age of deaths — 45 years.

Probably the most effective way of assessing the extent to which emigration curtails the average worker's contribution to the island's labour force is to compare the several sources of decrement considered here as agents tending to reduce the average years of life remaining to a male aged 15 within the interval, 15 to 65. As the present consideration is limited to this age interval, the maximum number of years that can be lived, that is if mortality, retirement and migration do not operate, is 50. The extent to which this value is reduced as a result of the several sources of decrement is illustrated in Table 6H.^a The years of life lost because of mortality alone are

^aThe values in Table 6H. are not strictly comparable to the measures of the number of years spent in the labour force, the usual method for deriving which involves the application of the proportions gainfully occupied to the stationary population in the life table.

from the life table of 1953-54, while those lost as a result of mortality and emigration, and as a result of mortality, emigration and retirement are obtained from the decrement tables already discussed. The values dependent on mortality and retirement are from a decrement table in which the decrements are mortality and retirements.

TABLE 6H. AVERAGE YEARS OF LIFE REMAINING TO MALES AGED 15, WITHIN AGE INTERVALS 15-35, 35-65, AND 15-65, ACCORDING TO VARIOUS CONDITIONS OF DECREMENT, 1955

Age Interval	According to Decrement due to:				
	Mortality Alone	Mortality and Retirement	Mortality and Emigration		Mortality, Emigration and Retirement
			1954	1955	
15-35	19.5	19.5	17.2	15.5	14.8
35-65	24.9	24.2	14.7	9.0	8.1
15-65	44.4	43.7	31.9	24.5	22.9

It is seen that as a result of mortality alone, the average number of years remaining to each member of a cohort passing from age 15 to age 65 is 44.4 years, or 5.6 years less than the maximum of 50. The introduction of retirement cuts off very little from this; in fact the years lived in the labour force between ages 15 and 65 are 43.7, or only 0.7 year less than the value applicable to a life table population. The operation of mortality and emigration greatly reduces the total years of life remaining, and emphasizes in particular that emigration affects mostly the sector of the labour force between ages 35 and 65. The introduction of emigration at the rates prevailing in 1954 reduces the average years remaining between 15 and 65 to 31.9, while the value for the interval 35-65 (14.7 years) is 41 per cent lower than the corresponding value from the life table. As a result of the greatly enhanced rates of emigration of 1955 the average years of life remaining to a male at age 15 falls still further, being 24.5 or 45 per cent below the life table value, while for the interval 35-65 only 9 years remain, that is 36 per cent of the life table value. On the other hand the years remaining within the interval 15-35 are much less affected by the emigration of 1955, as the value (15.5) is only 21 per cent lower than that of the life table. The figures of the final column of the table emphasize that retirement influences the position to a very small degree; in fact the years of life remaining are very close to those obtained from the decrement table based on mortality and emigration for 1955. Still, as the former represent the true loss experienced by the labour force as a consequence of emigration, they must be considered carefully. The average number of working years remaining up to age 65 amounts to 22.9, that is 20.8 less than the years lived in the labour force when emigration is not considered. Thus at the rates of 1955 emigration reduces the average worker's contribution to the labour force by 48 per cent. This is somewhat higher than the reduction in the average worker's contribution to the reproductive performance of the

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population (measured on the same approach), which, it will be recalled, amounted to 35 per cent. It is important to note that most of this reduction is effected over age 35. Thus between ages 15 and 35 emigration causes a loss of only 4.7 years, whereas between 35 and 45 there is a loss of 16 years. In short, 77 per cent of the loss occurs between the ages of 35 and 65, which means that two-thirds of the average worker's contribution to the island's labour potential in this age range is sacrificed as a result of emigration.

Some Monetary Implications of Loss due to Emigration

The foregoing measurements of loss to the labour force resulting from emigration, framed in terms of the average number of years remaining to persons entering the labour force at age 15, are of a formally demographic nature, and convey no idea of the possible monetary implications of such loss. Indeed as will be argued in the concluding chapter, the entire concept of loss resulting from emigration cannot be literally interpreted or explicitly and accurately demonstrated by any formal calculation, because inevitably changes in the several sectors of the economy will be induced and these must almost certainly tend to the establishment of some new equilibrium. In any event therefore attempts to quantify in monetary terms the precise economic implications of emigration are beset with difficulties and pitfalls. Nevertheless even in the present restricted compass of analysis it seems necessary to present as supplementary to the wholly demographic approach hitherto employed some monetary function indicative of the loss that may accrue to the island as a result of the prolonged continuance of rates of emigration at the level of 1955.

The concept of "the money value of a man" presents itself as one approach to the problem of translating into monetary terms the loss resulting from emigration^a. The present value of a man's gross future earnings is here used to assess this loss. On this approach we can "capitalize" the gross future earnings of a cohort of persons who, as they pass through their span of working life (taken here as from 20 to 65), are subject to the prevailing participation rates and to the mortality of 1953-55; in effect this can be taken as measuring the average worker's monetary contribution to the island's economy, assuming a span of working life of from age 20 to age 65. In the same way we can consider the present value of another cohort of persons subject to the same participation rates and mortality, but who in addition are being depleted by emigration at the rates prevailing in 1955. The difference between the two totals of gross future earnings can be taken as a measure of the loss that on the average may result from emigration. It is usual in analyses of this nature to consider the net and not the gross future earnings, that is to consider also the cost of living of those in the cohort, and of their families as well. But as the present simplified approach seeks merely to arrive at an

^aThe concept and methods of analysis of the money value of a man are fully treated in L. I. Dublin and A. J. Lotka (5).

approximate difference between two sets of future earnings the cost of living function is not included here. The problem of the monetary loss to a country as a result of emigration, it should be noted, is often considered in terms of the public and private expenditure incurred in bringing up a child to the age of entry into the labour force. On this view, "the acquisition of a number of individuals, at the beginning or the early part of the productive period of their lives, on whom it has spent nothing during their non-productive childhood and adolescence" means an appreciable gain to the receiving country and a corresponding loss to the sending country (7). The present study however considers solely the loss per person when the size (and hence the gross financial contribution) of a cohort of workers is subject to decrements due to emigration at the rates prevailing in 1955. As the present interest centres mainly on the effects emigration produces on monetary contributions of those in the economically active age span, living costs are less relevant.

In order to carry out computations of this nature a reliable age schedule of wage rates is necessary. The present study was not planned to yield any data on earnings of persons before they emigrated from Jamaica. And in the absence of any current data of this nature we have again been forced to resort to estimates of a somewhat crude nature. The earnings of emigrants were studied by Maunder but he gave no break-downs by age (9). He showed that weekly earnings of emigrants before they left the island varied considerably. They were lowest among the unskilled, with an average of about 40 shillings per week. The second highest level was among the skilled workers who on the average earned 58 shillings per week, while the other types of more highly paid workers received on the average 65 shillings per week. Weighting these by the proportions of unskilled, skilled and other types of workers emigrating during 1953-55, we obtain an average weekly figure of about 55 shillings. A rough age schedule of wages has been constructed by using this figure in conjunction with the age schedule of wages between the ages 20 and 69 shown by the 1943 census data. The average earnings of males aged 20-69 was, according to the 1943 census data, 24.36 shillings, or less than half of the average based on Maunder's data. Accordingly it is here arbitrarily assumed that an increase in the average wages for the several age groups of 1943 by the ratio 55/24.36 gives a rough indication of the weekly earnings applicable to the problem in hand. The age schedule of wages thus derived is as follows:

Age Group	Weekly Wages in Shillings
20-24	38
25-29	49
30-34	57
35-39	62
40-49	64
50-59	70
60-69	56

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It is thus clear that the maximum earnings per worker are found within the age span which, as has already been shown, is most affected by emigration, namely between the ages of 35 and 65. It should therefore be expected that the present approach would show a substantial loss accruing as a result of emigration at the level of 1955.

These wages are taken as applicable to the mid-points of the respective age groups involved, and values for single years of age are fitted in by interpolation. Similarly the proportions employed for the several quinquennial age groups are taken as applicable to the central age of the respective intervals, and values for single years are obtained by interpolation. For the computation of the gross future earnings based on mortality alone the life table rates for the males for 1953-54 are used, with the radix placed at age 20, and the survivors to the mid-points of the single years are estimated by interpolation. Similarly, for the gross future earnings based on mortality and emigration, the decrement table for males based on mortality and emigration is used, with the radix placed at age 20. The rate of interest used to compute the discounted value of the gross future earnings in both cases is $2\frac{1}{2}$ per cent.

Table 6I. shows selected values from the complete computations at quinquennial periods. In order to facilitate comparisons the survivors columns are in each case re-computed on the assumption that a radix of 10,000 is placed at the beginning of age 20. The striking differences between the two survivors columns express in another form what has already been demonstrated by previous analyses, the extent to which emigration depletes the cohort of workers. Thus the proportion surviving to mid 64-65 is, when the cohort is subject to mortality alone, 64 per cent, that is twice the proportion surviving to the same age when the cohort is subject to both mortality and emigration. The present value at age 20 of the annual gross earnings of survivors at successive intervals emphasizes the loss caused by emigration. Thus at age 35-36 the present value of the annual earnings of survivors, when emigration is introduced, is one half that of the survivors determined on the basis of mortality alone. And the proportion continues to decline steeply and by age 64-65 is only 32 per cent. The overall result of the computations is however of more significance. Thus the present value of the gross future earnings of a male at age 20 is, under conditions of no emigration, about £3,370, whereas the present value of the gross future earnings under conditions of emigration is reduced to about half of this — £1,770. On this approach therefore it can be said that the average contribution of a male at age 20 is, when measured in terms of the present value of his earnings, reduced by about £1,600 as a consequence of emigration at the level of 1955, thus emigration at the level of 1955 results in a loss of 48 per cent in the "capital value" of the average worker at age 20.

The merit of such a presentation is that it depicts in striking form the possible loss under the wholly artificial conditions of a prolonged emigration at the rates of 1955. But the limitations of such conventional computations,

TABLE 6I. SELECTED VALUES FROM COMPUTATIONS OF MONEY VALUE OF A MAN, BASED ON A COHORT AT AGE 20, SUBJECT TO MORTALITY ALONE AND ON ANOTHER COHORT SUBJECT TO MORTALITY AND EMIGRATION

Age	Survivors out of 10,000 at Age 20, Subject to:		Annual Earnings in Shillings	Rates of Participation	Present Value* at 2½% of Annual Earnings of Employed Survivors According to:		(b) as % (a)
	Mortality Alone	Mortality and emigration			Mortality alone (a)	Mortality and emigration (b)	
20-21	9,989	9,876	1,716	.798	13,508	13,355	98.9
25-26	9,852	8,113	2,344	.908	18,304	15,073	82.3
30-31	9,679	6,085	2,825	.951	20,069	12,618	62.9
35-36	9,489	4,777	3,133	.968	19,629	9,882	50.3
40-41	9,277	3,979	3,263	.971	17,717	7,599	42.9
45-46	8,911	3,358	3,393	.961	15,483	5,834	37.7
50-51	8,468	2,912	3,597	.943	13,528	4,652	34.4
55-56	7,938	2,604	3,653	.919	11,092	3,639	32.8
60-61	7,144	2,281	3,523	.878	8,129	2,596	31.9
64-65	6,368	2,008	2,934	.824	5,132	1,618	31.5

*In 10,000 shillings.

applicable to strictly static situations, must again be stressed. In particular the possibility that workers emigrating to the United Kingdom may receive wages higher than those they might receive in Jamaica and remit appreciable sums to the island should to some degree tend to offset the loss estimated here. These issues will be re-considered in the concluding chapter.

Emigration and Replacement of the Labour Force

The question now arises whether the crude estimates of accession already considered can be utilized, in conjunction with the various sources of decrement dealt with here, in order to gain an idea of the extent to which emigration tends to retard the replacement of the labour force. The estimates of increment and decrement over the age span considered show that in 1955 the labour force was decreasing slightly. It must therefore be considered whether this implies a severe impairment of the capacity of the labour force to replace itself.

Before considering the question of the extent to which emigration retards replacement it is necessary to assess replacement of the labour force when decrements due to mortality and retirement alone are in operation. The estimated accessions in a given year constitute in effect estimates of the numbers of replacements generated each year, and when related to the average labour force furnish estimates of the age specific rates at which the labour force is replaced. A schedule of such rates, applied to an appropriate stationary population, can yield a measure of replacement. The stationary population used here is that derived from the decrement table with two sources of decrement, mortality and retirement. (In effect, since retirement does not commence before age 40, it means that only one source of decrement, mortality,

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is involved.) In computing a measure of reproduction applicable to a population recruited by births and being depleted by deaths, the N. R. R. is obtained by relating the estimated number of children born in the stationary population to the radix of the life table, placed at age 0. Here however it seems inappropriate to do this, since the labour force is conceived not as being dependent on births at all, but as being increased by entrants from an existing stock of adult males. Accordingly a radix at age 15 is used in deriving a rate at which the labour force, renewing itself by the accession of workers and subject to decrements due to mortality and retirement, replaces itself. This implies that there is no decrement before age 15, and is complementary to the assumption underlying the construction of the decrement table, namely that the labour force is recruited annually by a group of workers, all of whom are aged 15 years. By applying the rates to the stationary population an index of replacement for the labour force of 1.48 is obtained. In other words the new workers generated each year amount to 14,800, whereas the annual addition to the stationary population (that is the radix at age 15) is 10,000. Though this value is not strictly comparable to a measure of replacement for the population as a whole it is of interest to note how it compares with the net reproduction rate of Table 5I. The latter (1.81) is 22 per cent higher than the estimated measure of replacement of the labour force. However, when account is taken of the relatively low average age of workers who are supposed to "generate" new workers (equivalent to 19.2 years), this difference largely disappears. For the "intrinsic rate of growth" on this basis amounts to 2.1 per cent which is very close to that of the island population (2.2 per cent).

In order to assess the effects of emigration on this measure of replacement of the labour force, the schedule of rates is related to the stationary population of the decrement table based on mortality, retirement and emigration for 1955. On this basis, a measure of replacement of 1.35 is obtained, indicating a capacity to increase by 35 per cent within a "generation". Reduced to an annual rate within a "generation", this amounts to 1.6 per cent which is appreciably higher than the corresponding value for the entire population exposed to mortality and emigration at the 1955 level, which stands at 1.2 per cent. The fact that emigration at the level of 1955 induces a reduction of only 9 per cent in the capacity of the labour force to replace itself, although it suffices to bring about a small decline in the actual size of the labour force, is an apparent paradox calling for further consideration. A comparison between the age schedule of replacement and the age schedule of rates of emigration helps to clarify this problem.

The differences between the rates at which workers are replaced and the rates at which they are depleted by emigration are of importance, as to a very large degree they condition the overall capacity of the labour force to replace itself. The two age schedules are entirely different in form, as can

be seen from Table 6J. Apart from the fact that in general replacement is limited to the age span 15-25, while emigration constitutes an important source of decrement up to age 60, it is clear that in the initial age group the rate of emigration (12 per 1,000) is negligible compared with the rate of replacement (206 per 1,000). In the age group 20-24, the difference between the two rates is much less, these being 67 and 39 respectively. At higher ages the rates of emigration appear progressively higher than those of replacement. The fact that under age 20, where most of the recruitment to the labour force takes place, the rate of replacement vastly exceeds the rate of emigration while over age 25 rates of emigration greatly exceed those of replacement is at the root of the seeming paradox noted above.

TABLE 6J. RATES OF REPLACEMENT AND OF EMIGRATION PER 10,000 MALES IN THE LABOUR FORCE, AGED 15-39, 1955

Age Group	Rate of Replacement (a)	Rate of Emigration (b)	(b) as % (a)
15-19	2063	125	6.1
20-24	666	385	57.8
25-29	170	567	333.5
30-34	52	474	911.5
35-39	31	337	1087.1

Clearly the age distribution of emigrants in 1955 is not such as to curtail drastically the capacity of the labour force to replace itself. Only if emigration comes to involve the age interval 15-25 to any marked degree is it likely to have any strong influence on the level of labour force replacement, as here conceived.

In the present context a firm distinction must be drawn between two aspects of the impact of emigration on the island's labour force. On the one hand there is the influence of emigration on the capacity of the labour force to replace itself. On the other hand there is its influence on the actual size of the labour force and on the average contribution per worker to the labour force potential. The effects of emigration in the latter sense, it will be recalled, are reflected in the number of years a worker spends in the labour force as well as in his average contribution to the island's economy. Whereas in the first sense emigration does not have any pronounced impact, its significance in the second aspect is self-evident. Indeed any attempt to assess the influence of emigration in terms of replacement alone strongly underestimates its entire importance. Further discussions of the effects of emigration on the labour force are reserved for the concluding chapter of this study.

It seems that the emigration of workers can hardly ever have the effect of completely offsetting replacement. Since it is emigration of workers that is being treated, an individual must first enter the labour force before he is at risk of leaving the country (though, as has already been shown, there are a few exceptions to this rule). Ultimately however prolonged emigration of workers at, say, the level of 1955 can reduce the size of

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the population of child-bearing age and thus induce a decline in successive birth cohorts. This can eventually lead to a fall in the numbers attaining working age annually, and such a development may reduce the level of replacement of the labour force. These however are long-term considerations and hardly relevant to the present analysis.

The Accumulation of Workers Abroad

There is another problem which the decrement table of the labour force helps to illuminate, the relation between the decline in the labour force in the island as a consequence of emigration and the build-up of emigrants abroad. This aspect of emigration assumes importance primarily because of the possibility that some factors in the United Kingdom, such as a severe economic recession, may stimulate a large-scale return to the island.

As a first approach to the problem of the build-up abroad, the results of a multiple decrement table can be used. It is possible to construct a column somewhat analogous to a survivors column in reverse, showing how emigrants living abroad and subject to certain rates of mortality would accumulate over a period of time (1, 22). For simplicity, loss due to retirement from the labour force is not considered. If it is assumed that initially there are no workers abroad, then this column, which commences at age 15, will have as its first entry 0. It cannot be assumed that all of the emigrants of the cohort who left the island within the age interval 15–20 survived to age 20. About half of them would experience the relevant mortality between ages 15 and 20 in their new environment. So that the survivors to age 20 would be the emigrants between 15 and 20 less these deaths. Similarly all the survivors to age 20 plus half of those emigrating between 20 and 25 would be subject to the mortality within this interval, and the survivors to age 25 would be the survivors to age 20, less the deaths between 20 and 25, plus the emigration in the interval. And so a column of accumulated emigrants abroad can be built up, as shown in Table 6K. The survivors column represents the numbers remaining at work in the island out of a cohort of 10,000 workers exposed to the several schedules of decrement, whereas the accumulation of emigrants indicates the groups of workers established abroad out of the same cohort. The latter is expressed as rates per 1,000 of the survivors. It appears that at the rates of emigration of 1955 a cohort of workers would by the time its members attain age 33 have as many in the island as abroad. As the cohort ages, the proportion abroad increases markedly, and by age 55 those abroad are more than twice as numerous as those remaining at work in the island. These calculations are of only limited value as they give no indication of the effects of the movement on a population.

A more useful approach than the foregoing is to consider the possible composition of the labour force component of a stationary population if the rates of emigration continue for an extended period. In other words if the population of the island is recruited annually by a cohort of births and

TABLE 6K. ACCUMULATION OF EMIGRANTS ABROAD OUT OF A COHORT OF 10,000 MALE WORKERS SUBJECT TO EMIGRATION OF 1955

Age Interval	Survivors	Emigrants	Deaths among Emigrants	Emigrants Alive Abroad	Emigrants Abroad per 1,000 Survivors
15-20	10,000	603	2	0	0
20-25	9,328	1,627	17	601	64
25-30	7,588	1,870	47	2,211	291
30-35	5,605	1,178	82	4,033	720
35-40	4,328	667	107	5,130	1,185
40-45	3,577	450	211	5,690	1,591
45-50	2,983	277	283	5,929	1,988
50-55	2,538	131	344	5,923	2,334
55-60	2,209	63	535	5,709	2,584
60-65	1,881	32		5,240	2,786

depleted to the same extent by deaths, with an age pattern of mortality of 1953-54 and subject to rates of emigration of 1955, what age distribution can the labour force be expected to show, and how may this be distributed between workers in the island and workers who emigrated and are resident abroad? This, though somewhat more realistic than the previous approach, is itself still a hypothetical situation, but its chief advantage in the present context is the way in which it shows the concentration of workers abroad that may result from prolonged emigration.

Such an approach can best be made by an extension of the previous discussion in terms of a reverse survivors column. If we consider a cohort coming under observation at age 15 and subject to decrements due to mortality and emigration, and if we put l_x^a as the survivors of that cohort living outside the island at age x , and l_x^i as the survivors of the cohort who remain alive in the island at age x , and M_x as the probability of a male emigrating from Jamaica at age x , then

$$l_x^a + l_x^i = l_x$$

and

$$l_x^i = l_{15} \cdot p_{15, x-15} \cdot (1 - M_{15, x})$$

So that if we take the reverse survivors column as l_x^a and compute an l_x column on the basis of the ordinary probabilities of death (5^a) then estimates l_x^i can be obtained. A stationary population can then be derived from the l_x column and by application of the rates of participation in the labour force age composition of the labour force in such a stationary population can be made. The proportional distribution of the l_x column in terms of l_x^a and l_x^i can then be used to divide the stationary population in the labour force into two groups, those residents in the island and those who have emigrated.

The results of such a computation are set out in Table 6L. That the rates of emigration have a powerful effect is evident. Between the ages of 20 and 40 the proportion of workers living abroad increases steeply, from 6 per

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cent in the age groups 20-24 to 42 per cent in the group 30-34. It continues to rise after this and within the group 60-64 is 74 per cent. For the age span considered, there is still more than half of the labour potential thus conceived resident in the island (53 per cent). But again an outstanding feature of the disposition of the workers under the impact of emigration is the large proportion over 35 appearing as emigrants. This shows that it is the most highly paid and experienced sections that accumulate abroad. In fact the average age of workers of Jamaican birth resident abroad stands at 46.2 years, which is much higher than the average for those remaining in the island (33.4 years).

TABLE 6L. ESTIMATED COMPOSITION OF A STATIONARY POPULATION IN TERMS OF WORKERS RESIDENT IN THE ISLAND AND THOSE WHO HAVE EMIGRATED AND ARE LIVING ABROAD

Age Group	Stationary Population	Stationary Population in Labour Force	Stationary Population in the Labour Force Resident:		% Living Abroad
			In Jamaica	Abroad	
15-	49,823	27,602	27,602	—	—
20-	49,316	41,968	39,426	2,543	6.1
25-	48,569	45,218	35,023	10,195	22.5
30-	47,676	45,674	26,584	19,090	41.8
35-	46,701	45,393	20,810	24,583	54.2
40-	45,322	43,872	16,980	26,892	61.3
45-	43,348	41,397	13,891	27,506	66.4
50-	40,996	38,290	11,495	26,795	70.0
55-	37,832	34,276	9,525	24,751	72.2
60-	33,553	28,621	7,492	21,128	73.8

CHAPTER 7

EMIGRATION AS A SOURCE OF SEPARATION IN THE SUGAR INDUSTRY

The advantages of supplementing the previous analysis, particularly that of Chapter 6, with information measuring the impact of emigration on specific industries in the island are obvious. In particular the experience of industries employing large numbers of the occupational classes which, according to the migration records, have been heavily depleted by emigration, is of great relevance in this context. However there are obvious difficulties to be faced in conducting such an enquiry. For though most industries can supply records of separations and records of the average numbers they employ in any given year, it is most unlikely that many of them will be in a position to state which of the separations were due to emigration. Moreover only industries maintaining a stable labour force can be used for such study; industries like the building trade, where in general the labour force attached to a particular establishment is subject to frequent change, cannot readily form the subject of study along these lines. Consequently only a modest enquiry of the role of emigration as a factor in labour turnover in industry in the island is attempted here.

Approaches made to the Sugar Manufacturers' Association revealed that information on separations due to emigration could be supplied by sugar factories, and accordingly a questionnaire was prepared in co-operation with this Association for despatch to its members. The response to this was good: 14 of the 20 factories were able to supply the necessary information. The records supplied cover mainly the skilled and semi-skilled factory workers and with the exception of tractor drivers exclude all types of field workers. Information has been given on the number of workers employed during the crop season, the number employed out of the crop season, as well as the number of separations due to all causes and those due to emigration in 1955.

The 12 skilled and semi-skilled categories into which the sugar factory workers have been divided are not fully representative of the occupational structure of the skilled labour force of the island as a whole. It is also doubtful whether, in view of the exclusive rural location of the industry, its experience gives an adequate picture of losses due to emigration by the more urban centred industries. The seasonal nature of sugar factory operations tends to result in relatively high rates of labour turnover in some of the occupations considered here, and at the same time gives rise to difficulties in the way of ascertaining the cause of separation, despite the careful check these estates maintain on movements of their employees. Nevertheless it is believed that the employment records are sufficiently well organized to give some indication of the separations due to emigration in one of the island's most important industries.

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Quantitative Data on Effects of Emigration on Sugar Factories

From Table 7A. it will be seen that the average number employed in all the categories specified by these factories in 1955 stands at 2,450. This constitutes a small proportion of such skilled and semi-skilled workers throughout the island; the total of these in 1955 (excluding tailors) was, according to the method of estimation used in this study, 63,300. Mechanics are much more heavily represented in the sugar industry than in the skilled labour force at large; the 680 mechanics recorded represent 28 per cent of the total skilled and semi-skilled workers in the industry. Second in size is the category termed process workers, numbering 500 or one fifth of the total. The miscellaneous class of other skilled workers numbers 440 and accounts for 18 per cent of the total. The six categories, chauffeurs, tractor drivers, mechanics, electricians, blacksmiths and welders correspond broadly to the class of workers coded 05 in the present study, and together these account for 47 per cent of all skilled and semi-skilled workers employed in the sugar factories. Carpenters, masons, plumbers and painters, most of whom are probably engaged in maintenance and repairs and not in the construction of new buildings, account for 15 per cent of the total.

TABLE 7A. AVERAGE NUMBERS OF SKILLED AND SEMI-SKILLED WORKERS EMPLOYED IN 14 SUGAR FACTORIES, THE NUMBERS OF TOTAL SEPARATIONS AND THE NUMBERS OF SEPARATIONS DUE TO EMIGRATION, 1955

Occupational Category	Average Number Employed	Separations due to:	
		All Sources	Emigration
Carpenters	235	33	19
Masons	49	10	5
Plumbers	25	5	2
Painters	50	4	1
Chauffeurs	94	8	.2
Tractor Drivers	182	37	24
Mechanics	680	132	86
Electricians	96	22	11
Blacksmiths	48	5	2
Welders	46	20	9
Other Skilled	441	41	26
Process Workers	503	43	38
Total	2,449	360	225

According to these records, 225 of the skilled and semi-skilled workers of the 14 sugar factories considered emigrated in 1955. By far the largest number of these (86) were mechanics, while second in importance were process workers, 38 of whom emigrated. Emigration of workers falling broadly into the class designated code 05 number 134, those engaged largely in building amount to 27, while the number of emigrants from the ranks of other skilled and semi-skilled and process workers is 64.

It is interesting to consider to what extent emigration contributes to overall separations in the 12 occupational categories. There are 360 separations of all kinds and 225 of these, or 63 per cent, are due to emigration. Emigration as a factor in separation is most important in the case of the process workers;

here it accounts for 88 per cent of all separations. Of the category of other skilled workers 63 per cent of total separations are due to emigration, and the proportion is substantial also for tractor drivers and mechanics, 65 per cent each. As a source of separation, emigration is least important in the case of painters and chauffeurs, one quarter of the separations here being from emigration. Considering the occupational categories in terms of three broad groups, those largely in building, those falling in code 05 and the remainder, we see that just over half of the separations from the building occupations are due to emigration, while 60 per cent of those from code 05 workers and 76 per cent of those from the remainder are ascribed to the same cause.

More important than the actual number of separations are the rates of separations and these are shown in Table 7B. These, defined here as the number of separations per 1,000 of the average number employed, are equivalent to the rates of separation due to emigration. No attempt is made here to consider exhaustively the labour turnover situation in the sugar factories. All that this brief analysis seeks to do is to consider emigration as a source of separation in relation to all other sources of separation. Nor can it be said here whether the rates of separation from the several causes shown by these factories are at all typical or atypical of the experience of skilled workers in other industries. A qualification of these rates must be noted. Because of the varying numbers involved in the several categories, the rates of separation are not of equal weight. For instance there are only 25 plumbers and 46 welders, whereas the numbers of mechanics and process workers are many times greater, 680 and 503 respectively. However in this analysis it is assumed that all rates are of equal weight.

TABLE 7B. RATES OF SEPARATION EXPERIENCED BY THE 14 SUGAR FACTORIES, 1955

Occupational Category	Rates of Separation per 1,000 Average Employed, Due to:		
	All Causes	Emigration	Other Causes
Carpenters	140.1	80.7	59.4
Masons	202.0	101.0	101.0
Plumbers	204.1	81.6	122.5
Painters	80.0	20.0	60.0
Chauffeurs	85.1	21.3	63.8
Tractor Drivers	203.3	131.9	71.4
Mechanics	194.1	126.5	67.6
Electricians	230.4	115.2	115.2
Blacksmiths	103.1	41.2	61.9
Welders	434.8	195.7	239.1
Other Skilled	93.1	59.0	34.1
Process Workers	85.5	75.5	10.0
Total	147.0	91.9	55.1

Welders show the highest loss due to emigration, 196 per 1,000, while other categories experiencing heavy loss due to this source are tractor drivers (132), mechanics (127) and electricians (115). Painters show the lowest rate of emigration (20). Rates of separation due to other causes are greatest among welders (239), plumbers (122) and electricians, while process workers show by far the lowest rate (10). If we consider the 12 occupational categories in

terms of three broad groups, those corresponding to code 05 workers of the present study, those engaged in building and the remainder, those of code 05 experience the highest rate of emigration (117 per 1,000), while building workers show a rate of 75 and other workers a rate of 68. In respect of losses due to other causes, code 05 workers again show the greatest rate (79); second come the workers in the building trade with a rate of 69, while the other group shows the comparatively low rate of 21.

A comparison between the rates of separation due to emigration and the rates due to other causes in 1955 shows that emigration proves the stronger source of loss in the case of six occupations: carpenters, tractor drivers, mechanics, welders, other skilled workers and process workers. Two occupations, masons and electricians, show about equal levels of rates for the two factors, while plumbers, painters, chauffeurs and blacksmiths show other causes as a much higher factor in labour separation than emigration. The importance of emigration as a causal factor in the pattern of separation from the sugar factories is emphasized by the fact that the overall rate of emigration affecting all occupations (92 per 1,000) is much higher than the overall rate of loss ascribed to all other factors (55). But available data do not justify any precise assessment of the relative importance of emigration as a component element in total separation experienced by the several occupational classes of sugar factory workers in 1955.

An important question is how these rates of emigration experienced by the sugar industry compare with the overall island rates for 1955. The rates for carpenters and masons, 81 and 101 per 1,000 respectively, are much lower than the corresponding island-wide rates, which are 113 and 211 per 1,000 respectively. The six occupational categories equivalent to code 05 show a joint rate of emigration of 117, whereas the rate for the entire code 05 occupational class amounts to 183. The remainder, that is other skilled workers and process workers, experience a rate of 68 and this exceeds the rate obtained for the miscellaneous class of skilled and semi-skilled workers of code 06, who are depleted at the rate of 50 per 1,000 through emigration in 1955. If we consider the four relevant classes of skilled and semi-skilled workers for the emigration data: carpenters, masons, mechanics, etc., and other skilled and semi-skilled workers (for this purpose tailors are excluded) then the overall rate of emigration for these taken together (95 per 1,000) is very close to that shown by the entire group of workers in the sugar factories (92 per 1,000).

Another important aspect of the rates of separation is the pattern of loss revealed when the labour force of the sugar factories is divided not in terms of occupational categories, but in terms of the 14 sugar factories involved. Doubtless each factory is subject to its own peculiar conditions, its geographical location especially exposing it to distinctive levels of labour demand and supply. Competition from the bauxite industry, for instance, is reported by some estates to be a potent factor determining rates of separation from sugar

estates. However it is not the present purpose to attempt to explain the wide variations in rates of separation exhibited by the 14 factories. Rather it is our concern to see how emigration fits into the broader picture of labour separation among the skilled workers.

The average number of skilled and semi-skilled workers employed, together with total separations due to emigration, are given in Table 7C., where the 14 factories are indicated by the letters A to N. Clearly they vary in size considerably. Only one employs more than 500; one employs 350 and three employ less than 100. For one factory, it appears that nearly all the separations (21 out of 22) are ascribed to emigration. Proportions due to emigration exceed 80 per cent in 3 other factories, and only in the case of 3 does emigration account for less than half of the separations.

TABLE 7C. AVERAGE NUMBER OF SKILLED AND SEMI-SKILLED WORKERS EMPLOYED IN 14 SUGAR FACTORIES, THE NUMBERS OF TOTAL SEPARATIONS AND THE NUMBERS OF SEPARATIONS DUE TO EMIGRATION, 1955

Factory	Average Number Employed	Separations Due to:	
		All sources	Emigration
A	105	14	12
B	133	28	23
C	240	21	14
D	534	55	39
E	58	3	2
F	87	26	23
G	165	23	13
H	151	22	21
I	150	16	7
J	108	14	4
K	166	20	10
L	99	31	8
M	348	71	40
N	105	16	9
Total	2,449	360	225

Of greater interest are the rates of separation experienced by the 14 factories in 1955, and these appear in Table 7D., where once more the factories are designated by the letters A to N. Considerable variation in the rates of emigration is evident. The highest is 274, while 4 other factories show rates in excess of 100 per 1,000. Of the total, 9 factories experience rates of less than 100, but of these only 3 are under 50. The outstanding feature of the rates of separation due to other causes is of course the very high rates experienced by one factory (232), which is higher than the rate of emigration for all factories, with one exception. The factory which was subject to this very high rate of loss from causes other than migration reported: "The greater proportion of skilled men leaving our employment have not emigrated, but have secured employment with the bauxite industry." The second highest rate is 92, while 7 factories report rates of separation due to other causes of under 50 per 1,000. In the case of the overall rates of separation, the highest is 313, and 3 others experience rates of over 200 but under 300; only 2 show rates below 100.

TABLE 7D. RATES OF SEPARATION PER 1,000 AVERAGE EMPLOYED IN 14 SUGAR FACTORIES, 1955

Sugar Factory	Rates of Separation Due to:		
	All Causes	Emigration	Other Causes
A	132.7	113.7	19.0
B	210.5	172.9	37.6
C	87.3	58.2	29.1
D	102.7	72.8	29.9
E	51.3	34.2	17.1
F	297.1	274.3	22.8
G	139.0	78.5	60.5
H	145.2	138.6	6.6
I	106.7	46.7	60.0
J	129.0	36.9	92.1
K	120.5	60.2	60.3
L	313.1	80.8	232.3
M	204.0	114.9	89.1
N	151.7	85.3	66.4

Again there is some indication that rates of emigration influence the overall rates of separation, though probably not to the same extent as when the data are considered in terms of occupational classes. However, in contrast to the occupational grouping, there is no suggestion that in general high rates of emigration are associated with high rates of separation due to other causes.

Limited though the present data are, they seem to complement the findings of the analysis of the migration cards that there are strong differences in rates of loss among the several occupational classes. Whether this rests on the conditions in the occupations or what causal elements are involved in establishing these differentials constitute problems which this study can not illuminate. Analyses along these lines turn on the varying motives which prompt individuals to emigrate, and lie outside the compass of this study.

Qualitative Data on Effects of Emigration on Sugar Factories

Another section of the sugar industry questionnaire sought non-quantitative information on a number of points arising out of the loss to the labour force resulting from emigration. In particular the factories were asked to indicate occupational categories in which they were experiencing difficulties in recruiting workers, and whether there was any evidence of deterioration in the quality of workers recruited in 1955.

The replies to these questions are summarized in Table 7E., which also gives the rates of separation due to emigration and to other causes, as, evidently, some relationships between these elements are to be observed.

There were 36 reports of great difficulty in recruiting labour, that is an average of 2.6 per factory. It will be seen that mechanics are by far the most difficult occupational category to secure. Of the 14 factories, 11 report this to be a very difficult type of worker to secure; 7 report electricians as very difficult to recruit, while welders are the third most difficult kind of worker

TABLE 7E. NUMBER OF REPORTS OF DIFFICULTY IN RECRUITING WORKERS, NUMBER OF REPORTS OF DETERIORATION IN QUALITY OF WORKERS AND RATES OF SEPARATION FROM SUGAR INDUSTRY, 1955

Occupational Category	Number of Reports of:		Rates of Separation Due to:	
	Difficulty in recruiting workers	Deterioration in quality of workers	Emigration	Other causes
Carpenters	1	5	80.7	59.4
Masons	2	4	101.0	101.0
Plumbers	1	3	81.6	122.5
Painters	1	3	20.0	60.0
Chauffeurs	1	3	21.3	63.8
Tractor Drivers	1	5	131.9	71.4
Mechanics	11	9	126.5	67.6
Electricians	7	5	115.2	115.2
Blacksmiths	2	4	41.2	61.9
Welders	6	7	195.7	239.1
Other Skilled	1	1	59.0	34.1
Process Workers	2	1	75.5	10.0

to obtain, 6 factories reporting difficulty in securing them. There does not seem to be great difficulty in recruiting process workers, other skilled workers, chauffeurs, tractor drivers and building workers.

There were many more reports on deterioration in the quality of work performed by the workers recruited, 50 reports of this kind being given, that is 3.6 per factory. Of the total factories 9 report a deterioration in the quality of mechanics employed. Welders, who, it will be recalled, experience the highest rates of emigration, are also reported to have shown deteriorations in the quality of their work, 7 reports to this effect being recorded. Deterioration in quality of work is also indicated for electricians, tractor drivers and carpenters, 5 factories claiming to have experienced deteriorations in these types of workers. Only two categories, process workers and other skilled workers, have not, apparently, deteriorated markedly in quality, as only one report each complains of deteriorations.

There is a large measure of agreement between the reports on shortages and deteriorations. In both, the major category employed in the factories (mechanics) appears as the most important, while welders and electricians figure prominently in both ratings. In fact when the two sets of frequencies of reports are ranked there is a positive correlation ($\tau = +.70$); this suggests that the difficulty of securing certain categories of workers is associated with the deteriorations in the quality of those which the industry is able to secure. Another important question is what association, if any, can be observed between reports of deterioration in quality of workers and of difficulty in recruitment on the one hand and rates of separation due to emigration on the other hand. Again it is convenient to consider this association in terms of a ranking analysis. Rates of emigration are strongly correlated with the reports of deterioration: $\tau = +.70$. There is also a strong positive correlation between rates of emigration and reports of difficulties in obtaining workers of the several occupational categories: $\tau = +.64$.

The present analysis shows that the sugar industry suffered notable depletion to its skilled and semi-skilled labour force as a result of emigration during 1955. The marked association between the overall levels of separation experienced by the several occupational categories of the industry and the rates of emigration, and the fact that emigration constitutes such a large proportion of total separations tends to establish fairly conclusively the roll of emigration in labour turnover in the sugar industry and the effects it has had: the creation of shortages and deteriorations in the quality of workers. This of course does not mean that precisely similar experiences have been noted throughout all industries, but it strongly suggests that the effects of emigration are widespread.

CHAPTER 8

RESULTS OF THE COLLATION PROCESS

As has been emphasized in Chapter 2, the incorporation of the collation process in plans for this study was an essentially experimental approach to the problem of refining the numbers in the several types of migrants and thus an attempt to obtain more precise estimates of the permanent and temporary movements affecting the island. It originally appeared to be especially relevant to study emigrants to the United Kingdom along these lines because of the possibility that some of them eventually return to the island. Moreover it appeared to be the only means of identifying those who did return, an essential process if any analysis of the characteristics of returning emigrants was to be made. But clearly the matching process has wider implications and it is therefore necessary to consider in some detail the several uses to which the collation of the records of departures and arrivals can be put.

In considering these the several types of migrants distinguished in this study are of especial interest. Thus, it will be recalled that departures included one major category, emigrants in search of work, and this is by definition a permanent loss to the island's population. The reliability of the declarations made by these persons thus assumes considerable significance and here the collation process must be used to test it. These departures, which in the context of this study involve only permanent residents of the island, must be evidently matched against all arrivals of Jamaican residents returning to the island. The latter, it will be recalled, constitute a category which cannot be broken down into types or purpose of visit. These are in effect the groups coded "RR" (returning resident) in the records of the immigration authorities. Therefore when these two sets of movements are compared any departure of a purportedly permanent nature which has its counterpart in the statistics of arrivals was erroneously coded as a permanent movement, and thus serves to reduce the estimate of the number of permanent movements from the island. By contrast this process serves also to correct the records of temporary outward movements. For it can be assumed that these departures were understated to the extent of the numbers of matches because of an error on the part of the traveller, an error in coding, or a genuine change of plans by the person on reaching his destination.

Another important type of departure, estimates of which can be refined by collating, involves persons leaving the island on holiday. Unlike the departures in search of permanent employment, we should expect to find corresponding arrivals, and thus all genuine departures on holiday should have their counterparts in arrivals of returning residents of Jamaica. Non-matches clearly signify that for one reason or another, whether from a change in intentions on the part of the migrant, or an error in coding, the supposed

temporary losses to the island's population have turned out to be permanent. There is again an obverse to this process of correction. For in effect it helps to refine our estimates of permanent loss to the island. Whereas matches among the permanent emigrants involve a downward correction to the estimates, the non-matches among the departures on holiday give an upward correction to the estimates of permanent emigration.

A third aspect of the collation process was planned. This centred around Jamaican-born persons resident abroad who returned to the island for some temporary purpose, such as holiday or business. The first legs of such voyages appear in the statistics of arrivals, and are coded as to type of travel. Their counterparts of course cannot be classified according to type of movement, though they correspond in the case of travel by resident Jamaicans to "returning residents". It was originally expected that there would be a very high proportion of matches when these two streams were collated. This however proved not to be the case, largely because, it seems, many of the Jamaicans resident abroad may, on one leg of the voyages in which they engaged, have used genuine tourist cards and not the migration cards with which this study is concerned. Whatever the reasons the fact remains that this proved the most unsatisfactory aspect of the collation process, and because of the very low proportion of matches secured on a trial basis, the attempt to collate these records was abandoned.

It was originally planned to do the matching mechanically, that is to run the two sets of punch cards, each arranged in sequence of passport number, simultaneously through a collator. Preliminary runs on a collator were made, but for several reasons it proved impracticable to perform the complete analysis on this machine. Accordingly the process was carried out by sorting the punch cards and putting them in sequence and then tabulating the relevant information and comparing visually the two tabulation sheets. This is much slower than working on a collator. But two experienced persons can carry out this visual matching very expeditiously and, as it has been proved, much more reliably than it can be done on a collator. For it turned out that the collating was not in all cases merely a question of matching passport numbers. Two factors tended to make the process somewhat more than simply assuring correspondence between numbers of passports or other travel documents. In the first place, there were instances of different persons travelling on documents bearing identical numbers. Here other information besides passport numbers was considered in determining matches, particularly the date and place of issue of the travel document and the year of birth. Moreover many persons were involved in more than one voyage during the period under study and this also called for some discrimination, which could not be assured by mechanical matching. As the numbers involved here were not very large the collating by these methods was satisfactorily performed. Nevertheless the fact that mechanical methods could not be used materially limited the matching analysis. In fact within the limited time available only two processes could be carried out, a complete matching of emigrants leaving the island

in search of work for the three years under review and a matching of the holiday departures of 1953 with the arrivals of 1953-55. From the present study it seems that a simple and reliable method of comparing the two migration streams with a view to refining estimates of the several categories of migrants can be based on the use of passport numbers, but only further analysis can show whether such an approach can be accomplished by straight runs on a collator.

Return of Persons Emigrating in Search of Employment

The cards of persons declaring that they were emigrating in search of work abroad were arranged in serial order by sex and year of departure, that is six different series of these cards were built up, two for each year. The following data were printed on tabulation sheets for the purpose of carrying out the visual matching and the subsequent analysis of the characteristics of the matches and the non-matches: sex, year of birth, occupation, passport number, date of issue of passport, place of issue of passport, ultimate destination, date of travel, length of stay abroad and the number of the code sheet (the latter was tabulated to facilitate reference to the code sheets when necessary). The cards of returning residents were however differently arranged. These were put into sequence according to passport number by sex, one group representing male arrivals during 1953-55 and the second female arrivals over this period. In the process of matching the tabulation sheets for arrivals with those for departures, the aim was of course to establish instances of agreement between the two series, each such instance constituting the return of a supposedly permanent emigrant. However, complications were encountered at some stages, particularly in the case of passports and other travel documents which carried serial numbers differing widely from the usual numbers now appearing on valid passports issued in Jamaica, say those with numbers higher than 180,000. Numbers outside this range, particularly those under 10,000, did provide instances of different persons having travel documents bearing the same serial number. Again, there were cases where many permanent emigrants undertook one or more voyages before those which took them abroad in search of permanent employment. Thus in 1953 there were 7 males and 4 females who travelled more than once before emigrating permanently, but in no year did these numbers exceed 10 for any one sex. There were cases in the range of Jamaican resident passport numbers where duplications were noted, but which were evidently not genuine matches. These were probably the result of errors in the copying or punching operations, or in the migration cards themselves, but they were very small in number, in no case exceeding 10 for any one sex. In this process only entries where both passport number and year of birth corresponded were accepted as matches in ranges far removed from the numbers usually associated with current passports of Jamaican residents. In other cases, however, where agreement of passport numbers but not year of birth was in evidence it was the passport numbers that were relied on in the main.

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The most important aspects of the results of the collation are summarized in Table 8A. In general it should be expected that a larger proportion of returning persons will be found in the case of departures in 1953, because these persons had a three-year period within which to return. The second highest proportion of returns should be expected for the departures of 1954, as these had more than one year within which to do so. The smallest proportion of returns should be among departures of 1955, as the time within which these might decide to do so was in general less than one year. Consequently it may be taken that the proportion of returns of 1953 represents the proportions who might be expected to return to Jamaica between two and three years after emigrating. The proportion of returns of 1954 represents the expected returns within one to two years after emigrating, while the proportion for 1955 represents the proportion returning in the same year of departure. However the rapid expansion of the movement between 1953 and 1955 may indicate that within the latter portion of the period studied more people emigrated with the firm intention of remaining abroad permanently. If this is so the low proportions returning among the emigrants of 1955 may not be entirely due to the short period available within which to do so. Unfortunately the limited time available did not permit a study of the periods spent abroad by those persons who returned to Jamaica though declaring, on departure, their intention of settling abroad permanently.

TABLE 8A. RETURNING EMIGRANTS WHO LEFT THE ISLAND IN SEARCH OF PERMANENT EMPLOYMENT, 1953-55

Destination of Emigrant	No. of Returning Emigrants				No. Returning as % Total Emigrants			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55
Male								
United Kingdom	73	108	65	246	5.7	2.1	0.6	1.4
United States	46	28	17	91	9.1	4.6	3.5	5.7
Canada	13	10	3	26	12.9	12.7	3.9	10.1
Elsewhere	110	35	38	183	52.4	20.6	27.3	35.3
Total	242	181	123	546	11.5	3.0	1.1	2.8
Female								
United Kingdom	60	74	34	168	6.9	2.6	0.6	1.7
United States	56	40	19	115	17.0	10.7	4.9	10.5
Canada	14	22	14	50	13.9	18.2	9.4	12.5
Elsewhere	59	28	27	114	31.2	19.6	19.9	24.4
Total	189	164	94	447	12.7	4.7	1.4	3.8

Of great importance are the variations in the proportions of supposedly permanent emigrants returning to the island in terms of different destinations. Thus over the three-year period the proportion of returns is by far the smallest in the case of persons travelling to the United Kingdom; only 1.4 per cent of the male and 1.7 per cent of the female emigrants to this destination returned to Jamaica. The proportions returning are much higher among persons travelling to other places. Thus more than one third of the males and about one quarter of the female departures in search of employment to the British West Indies, Latin America and similar areas returned to Jamaica

within two to three years. In general however, the proportion of emigrants who return is very small; the total for the period being only 2.8 per cent in the case of males and 3.8 per cent in the case of females.

The actual numbers returning are very small. This is of especial significance in regard to emigration to the United Kingdom. For one of the pertinent questions concerning this movement is whether the emigrants will remain in their new environment or fail to be satisfactorily integrated there and consequently return to Jamaica. The present data give no indication of any impending large-scale return to the island. Of those who emigrated in 1953 (1,280 males and 870 females) only 73 males and 60 females returned. Of the 5,180 males and 2,860 females who emigrated to the United Kingdom in 1954 only 108 males and 74 females returned. In 1955 emigrants to the United Kingdom numbered 10,910 males and 6,140 females and of these 65 males and 34 females returned in that same year. Even though the proportions of returning emigrants are, in the case of other destinations, much higher, here also the actual numbers involved are very small. Over the three-year period 1,600 males and 1,090 females departed to the United States with the declared intention of working there and of these 91 males and 115 females returned.

It is manifest that the declarations of purpose of departure are more reliable in the case of persons going to the United Kingdom than among persons going to other destinations. The much greater degree of apparent error among the latter emigrants may be associated with several factors. In the first place it may be more difficult for emigrants to secure permanent residence in the United States, Canada and Latin American countries than it is in the case of those going to the United Kingdom. Moreover, there may be a greater proportion of persons going to these countries not necessarily to settle permanently, but to seek to establish themselves there for as long a period of time as possible. Many of the declarations of departures to these destinations probably represent the expectations of the travellers of being able to establish themselves in these countries rather than the possession of visas entitling them to engage in permanent employment there.

Although only small numbers of persons departing in search of work return to the island it is of interest to examine the occupational pattern they disclose. Before doing so however an important limitation of the data must be noted. In many cases the occupations declared by the returning emigrants differ from those given when they left the island. This may indicate that these persons were not engaged in work of the type they were employed in before they left the island. On the other hand it may equally well be indicative of the lack of precision on the whole subject of occupational classification. In preparing the present tabulation, the occupation given when leaving the island and not that used when returning is considered. The occupational pattern for males returning from the United Kingdom and the United States are given in Table 8B. Unskilled workers returning from the United Kingdom total only 33, and most of these are farm

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Occupational Class	Returning from the United Kingdom				Returning from United States			
	1953	1954	1955	1953-55	1953	1954	1955	1953-55

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workers (26). Returning skilled workers over the three-year period were three times as numerous (110). The largest classes of the skilled were mechanics (41) and the miscellaneous class of skilled and semi-skilled workers coded 06, of whom 32 returned. Returns of other classes amounted to 103. Thus less than 1 per cent of the total unskilled emigrants leaving the island during 1953-55 returned. The corresponding proportion in the case of the skilled workers is slightly in excess of 1 per cent, while it stands much higher (5 per cent) in the case of other classes of workers. There is no means of telling from the present study whether the differing proportions returning for these three broad occupational categories are indicative of differing degrees in which the several groups are successfully assimilated into the United Kingdom environment, or whether they merely reflect the fact that the proportions of returning unskilled workers are lower because emigration among these got under way later than it did in the case of the skilled. Returning emigrants from the United States are small in number, amounting to 11 unskilled, 20 skilled and 60 other classes.

TABLE 8B. RETURNING MALE EMIGRANTS WHO LEFT THE ISLAND IN SEARCH OF PERMANENT EMPLOYMENT IN THE UNITED KINGDOM AND THE UNITED STATES, BY OCCUPATION, 1953-55

Occupational Class	Returning from the United Kingdom				Returning from United States			
	1953	1954	1953	1953-55	1953	1954	1953	1953-55
Unskilled								
02 Farm Workers	4	12	10	26	1	1	1	3
07 Others	2	1	2	5	2	—	3	5
11 Domestics	2	—	—	2	1	1	—	2
12 Personal Service	—	—	—	—	1	—	—	1
Total	8	13	12	33	5	2	4	11
Skilled								
03 Carpenters	10	8	1	19	3	—	—	3
04 Masons	3	5	2	10	—	1	—	1
05 Mechanics	6	21	14	41	2	2	1	5
06 Others	10	18	4	32	3	5	1	9
13 Tailors	2	2	4	8	1	1	—	2
Total	31	54	25	110	9	9	2	20
Other Classes	34	41	28	103	32	17	11	60
Grand Total	73	108	65	246	46	28	17	91

The occupational distribution of females returning from the United Kingdom is given in Table 8C. Clearly the pattern differs markedly from that of returning males. Over the three-year period 168 females returned from the United Kingdom. Housewives comprised the largest class (62), while dress-makers and domestic workers are also well represented.

The process of collation cannot be said to reveal any serious defects in the data on emigration to the United Kingdom; in view of the very small proportions returning in fact, the over statement involved in taking the declarations of the persons departing as indications of true emigration remains very

TABLE 8C. RETURNING FEMALE EMIGRANTS WHO LEFT THE ISLAND IN SEARCH OF PERMANENT EMPLOYMENT IN THE UNITED KINGDOM BY OCCUPATION, 1953-55

Occupational Class	1953	1954	1955	1953-55
06 Other Skilled	2	3	—	5
13 Dressmakers	9	18	6	33
11 Domestic	3	10	2	15
12 Personal Service	—	—	1	1
20 Housewives	23	23	16	62
Other Classes	23	20	9	52
Total	60	74	34	168

small. At the same time another correction has to be made to the original estimates of emigration, and this will be discussed presently.

The application of a process analogous to the foregoing in order to correct the estimates of permanent immigration would be advantageous, but unfortunately it proved impracticable to carry this out in the present study.

Persons Leaving the Island on Holiday and Not Returning

Since departures on holiday are taken to be of a temporary nature, they should all have their counterparts among the arrivals of returning residents, and those which do not match can then be considered as permanent departures. Only a limited examination of departures on holiday along these lines has been attempted here. Departures on holiday for 1953 have been arranged in sequence according to passport numbers, each sex separately, and matched against the arrivals of all returning residents during 1953-55. Two operations have been performed here; the actual matching of the two streams and an analysis of the time spent abroad. The matching process posed some difficulties because many persons were involved in several voyages and it was, in such cases, not easy to decide which one of the series of arrivals corresponded to a given departure. In about 15 cases for the males and 50 for the females it proved impossible to ascertain whether they constituted matches or not.

Table 8D. presents two important aspects of the non-matches, their destinations and their declarations as to the time they expected to spend abroad. These tabulations are based on a one-in-three sample of the total non-matches. For every third entry on the outgoing tabulation sheets the corresponding date of return, taken from the tabulation sheet of arrivals, was entered for comparison with the data of departure, and the time spent abroad was calculated. The greatest number of non-matches appears in the departures to the United States, 120 out of a total of 280 in the case of the males, and about 320 out of a total of 520 in the case of the females. It is however more important to consider the proportion which these non-matches constitute of total departures on holiday to the several destinations. The overall proportions amount to 24 per cent for the males and 21 per cent for the females. Departures to Latin America, the British West Indies and other countries show the largest proportion of non-matches, approximately one

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third for both sexes. About one in five of each sex in the case of departures to the United States evidently did not return, while the proportion in the case of departures to the United Kingdom was 14 per cent for the males and 19 per cent for the females. The large proportions not returning emphasize that travel on holiday as a definite type of migratory movement is much less clearly defined than is travel in search of permanent employment.

TABLE 8D. PERSONS DEPARTING ON HOLIDAY IN 1953 AND NOT RETURNING DURING 1953-55, SHOWING DECLARED LENGTH OF STAY ABROAD

Destination	Declared Length of Stay Abroad, in Months									
	Males					Females				
	Under 6	6 - 12	Over 12	Un-known	Total	Under 6	6 - 12	Over 12	Un-known	Total
United Kingdom	24	3	—	6	33	21	21	9	9	60
United States	84	36	—	3	123	165	138	3	12	318
Canada	9	3	3	3	18	3	6	6	3	18
Elsewhere	99	—	3	6	108	66	30	12	15	123
Total	216	42	6	18	282	255	195	30	39	519

Another important feature of Table 8D. is the declaration made as to the proposed length of stay on holiday abroad by those persons who failed to return. The great majority of the males (77 per cent) declared that they would be away for less than 6 months, while only 6 stated definitely that they would be away for periods in excess of one year. More of the females reported extended stays abroad, but even here half of the number indicated that their departures were for periods less than 6 months. Clearly not much significance can be attached to the information on length of stay abroad entered on these non-matched cards. However, as the analysis of proposed length of stay abroad was not extended to cover all departures on holiday (that is the matches were not considered) the overall reliability of the returns on proposed length of stay abroad cannot be assessed.

Comparisons between dates of arrival and dates of departure in the case of the matched cards made it possible to determine the length of time spent abroad on holiday. This tabulation was, as has already been indicated, done on a sample of one in three of the matched departures. The durations of stay abroad are summarized in Table 8E. Although, as has already been shown, only 76 per cent of the male departures on holiday and 79 per cent of female departures constitute genuine holiday travel (these were the proportions of matches achieved), it is clear that the proportion on the basis of persons returning in the year of departure is even smaller. The proportion of holiday departures showing matches within the same year is 69 per cent (males) and 60 per cent (females).

The average length of time spent abroad by all persons is 5.2 months for the males and 8.2 months for the females. In the case of persons staying abroad for periods of less than one year the average time spent abroad is 3.5 months for the males and 5 for the females. Of the males 61 per cent spend under 4 months abroad, but the proportions of females spending under

TABLE 8E. DISTRIBUTION OF LENGTH OF TIME SPENT ABROAD BY PERSONS TRAVELLING ON HOLIDAY

Time Spent Abroad in Months	Males	Females
Under 1	126	81
1 —	168	255
2 —	129	156
3 —	138	213
4 —	66	114
5 —	54	138
6 —	54	144
7 —	33	75
8 —	12	108
9 —	12	114
10 —	6	48
11 —	24	57
12 —	78	441
24 —	15	27
Total	915	1,971

4 months abroad is much lower — 36 per cent. The appreciable numbers who spend more than one year abroad on holiday should be noted: 10 per cent of the males and 24 per cent of the females actually spend more than one year abroad.

Revised Estimates of Permanent Emigration

In the present context particular importance attaches to emigration from the island, and it is therefore necessary to consider how the collation process can be employed in correcting the estimates of permanent emigration already used. Manifestly two kinds of correction can be made. The first is based on the matches secured from collating the supposed permanent emigrants from the island with the overall arrivals of Jamaican residents, while the second is derived from the non-matches when departures on holiday are collated with the overall arrivals of Jamaican residents. The first correction involves a reduction of the numbers of declared permanent emigrants by the number who returned to the island, while the second involves an addition to the declared permanent migrants of the number of departures on holiday not having counterparts in the arrivals of returning Jamaicans. In effect therefore the revised estimates of permanent emigrants consist of two groups of non-matches, those of declared permanent departures and those of declared departures on holiday.

From the previous description of the process of collation it will be seen that direct corrections can be made to the categories of permanent emigrants, because each year's emigration is collated against the records of returning residents of the island. However, the fact that the holiday departures for only one year (1953) are collated against the records of returning Jamaican residents, means that corrections for these departures have to be of an indirect nature, at least for the years 1954 and 1955. This indirect correction has been effected by using the analysis of time spent abroad by persons leaving the island on holiday in 1953. From these it is possible to compute the

proportion of departures on holiday returning to the island within the same year, the proportion returning to the island in the following year and the proportion returning more than two years after leaving the island. Table 8F. has been constructed from the analysis of length of time spent abroad on holiday. From this it appears that of persons going on holiday in a given year 69 per cent of the males and 60 per cent of the females can be assumed to return within the same year. Of these same departures 7 per cent of the males and 18 per cent of the females return in the year following their departure, while about 1 per cent of each sex return two or more years after leaving the island. If we assume that, during the three-year period under review, of the departures on holiday in 1955 69 per cent of the males and 60 per cent of the females return, that of those departing in 1954 75 per cent of the males and 78 per cent of the females return, and that of the departures in 1953 returns amount to 76 per cent for the males and 79 per cent for females, then estimates of genuine holiday departures can be arrived at.

TABLE 8F. PERCENTAGE DISTRIBUTION OF YEAR OF RETURN OF HOLIDAY DEPARTURES

Year of Return	Male	Female
In Year of Departure	68.67	60.36
In Following Year	6.52	17.71
After Two Years	1.25	1.09
Total % Returning to Island	76.44	79.16

Table 8G. shows the two sets of non-matches on which the new estimates of permanent emigration are based, and compares these with the numbers derived from entries on the migration cards. The present approach means that the entire three-year is treated as a unit of time for the assessment of the reliability of the declarations of permanent and temporary departures, though some significance still attaches to the agreements noted for the individual years. In the case of the males there is a very close agreement between the recorded and the corrected figures. In no case does the corrected estimate depart from those used in the present study and based on the migration cards by more than 1.1 per cent. It is also of interest that not all three years show differences in the same direction: while the data from the emigration cards proved slight overstatements in 1953 and 1954, there was a small understatement in respect of 1955. But since in no case does the disagreement exceed 1.1 per cent the differences can be virtually ignored. In fact a difference for the overall period of 100 in more than 2,000 emigrants is sufficiently small to justify fully the use of the migration cards as sources of accurate measures of permanent emigration. On the other hand the agreement between the corrected and the original values for the periods is not so close. There is clearly a persistent understatement in the figures obtained from the migration cards. The records for the whole three-year period show that the total of 12,500 understates the loss to the island by about 900. This error of 7 per cent emphasizes that the declarations of purpose of travel made by females are much less reliable than those made by males. Whether the

inaccuracy results from changes in the decisions of females to remain after reaching their destination or from patent mis-statements at the time of their departure cannot be determined. Possibly much of the non-matching among holiday departures to the United States rests on the success of persons in establishing themselves on a permanent or semi-permanent basis in that country, though on leaving the island prospects for achieving extended settlement were slight. However, it will be recalled that mis-statements both in respect of departures to seek work, as well as departures on holiday, were least in the case of movements to the United Kingdom, which is the centre of interest at the present. So that among females emigration to the United Kingdom can doubtless be measured with some reliability, at least with an error of under 7 per cent, by reference to the migration cards.

TABLE 8G. REVISED ESTIMATES OF PERMANENT EMIGRATION FROM JAMAICA, 1953-55

Year	Non-Matched Departures			Total Declared Permanent Emigration (b)	(a) as % (b)
	In Search of Work	On Holiday	Total (a)		
Males					
1953	1,860	280	2,140	2,170	98.6
1954	5,860	290	6,150	6,180	99.5
1955	11,490	440	11,930	11,780	101.3
1953-55	19,210	1,010	20,220	20,130	100.4
Females					
1953	1,310	530	1,840	1,640	112.2
1954	3,330	510	3,840	3,710	103.5
1955	6,750	970	7,720	7,140	108.1
1953-55	11,390	2,010	13,400	12,490	107.3

The division of permanent emigration into two categories in Table 8G. does not of course mean that these two categories indicate respectively emigrants in search of permanent employment, and emigrants leaving the island for other purposes; it is in fact probable that the majority leaving the island on holiday and failing to return have succeeded in establishing themselves in jobs in their new environment. The components of the emigration stream derived from holiday departures may represent a group who at the time of their departure were undecided as to whether they would return or seek to establish themselves abroad.

Revised Estimates of Temporary Emigration

Although no particular significance attaches to temporary departures from the island derived from the collation process it still remains of interest to examine the reliability of estimates of these from the original records in the light of the present approach. These revised estimates are derived from two sets of matched departures: those in search of permanent employment and those going on holiday. In effect this means taking as matched departures the differences between the total estimate of permanent emigration as revealed by the migration cards and the corresponding non-matches already dealt with, and the differences between estimates of holiday departures derived

from the migration cards and the corresponding non-matches. The results are shown in Table 8H. The agreement in the case of the males is not close. Again taking the three-year period as the unit of time over which to measure general agreement, we see that the declarations of purpose of travel give a total of 3,810, whereas corrections on the basis of the collated returns indicate a total of only 3,350. The overestimate of 12 per cent arrived at from the migration cards emphasizes that some of the permanent departures from the island take place under the guise of departures on holiday. This is even more fully shown by the movement of females. According to the migration cards departures on holiday over the three-year period total 7,300 or 1,560 more than the figure obtained by collating records.

TABLE 8H. REVISED ESTIMATES OF TEMPORARY EMIGRATION FROM JAMAICA, 1953-55

Year	Matched Departures			Total Declared Temporary Emigration (b)	(a) as % (b)
	In Search of Work	On Holiday	Total (a)		
Males					
1953	240	930	1,170	1,210	96.7
1954	180	900	1,080	1,180	91.5
1955	120	980	1,100	1,420	77.5
1953-55	540	2,810	3,350	3,810	87.9
Females					
1953	190	2,010	2,200	2,540	86.6
1954	160	1,810	1,970	2,320	84.9
1955	90	1,480	1,570	2,440	64.3
1953-55	440	5,300	5,740	7,300	78.6

The two components of these revised estimates have different implications. The smaller one, representing persons who left the island with the declared intention of seeking work, is not at all comparable to the second, which represents genuine departures on holiday. But in terms of migration statistics both can be taken as consisting in effect of temporary departures.

Revised Estimates of Net Emigration

One feature of the collation process which makes it inapplicable for use in devising new estimates of net loss to the population is that it does not involve any study of the errors in the records of permanent immigration. However on the assumption that these errors are not substantial the revised estimates of permanent emigration are used to construct revised estimates of net emigration. The method of preparing estimates of net emigration by the immigration authorities does not rest on the use of genuine measures of migration, but makes use of a comprehensive list of all passenger movements including the (temporary) movements of farm workers as well as movements of tourists. The large numbers of tourists involved tend to limit the validity of estimates of this nature. Since the immigration authorities keep a careful check on the entry and exit of aliens, it may be assumed that over a period of time, say more than two years, the effect of fluctuations in the numbers of tourists entering and leaving the island is cancelled, but it is clear that in any one year even a small proportional change in the numbers of tourists

entering the island will be sufficient to distort the pattern of net migration markedly and may even indicate a loss to the island, where in fact a gain has taken place. For the present the two sets of net emigrations derived from this study, that revealed by the declarations on the migration cards and that obtained by the collating process, are compared with the figures yielded by the immigration authorities in Table 81.

TABLE 81. REVISED ESTIMATES OF NET EMIGRATION, 1953-55

Year	Revised Estimates	Original Estimates	Estimates of Immigration Authorities
Males			
1953	1,510	1,540	2,430
1954	5,590	5,620	4,720
1955	11,210	11,060	11,690
1953-55	18,310	18,220	18,840
Females			
1953	1,270	1,050	1,850
1954	3,450	3,320	3,710
1955	7,110	6,530	7,190
1953-55	11,830	10,900	12,750

These comparisons emphasize the close agreement between revised data and the original data, especially in the case of the males, where the difference amounts to 80 in over 18,000. The difference of 900 in a total of about 11,000 in the case of the females is much greater and is in keeping with the findings of the less satisfactory data on purpose of travel for this sex. It is also instructive to compare the revised estimates with those of the immigration authorities. As is to be expected, no firm comparisons can be made in respect of the individual years. However in the case of the males the agreement between the two for the three-year period is very close. According to the revised estimate the net outward movement amounted to 18,300, whereas the immigration authorities put it at 18,800, thus indicating a difference of less than 3 per cent. The agreement in the case of the females is less encouraging. Whereas the revised estimates yield a net outward movement of 11,800, it amounts to 12,800 in terms of the estimates of the immigration authorities, a difference of about 7 per cent.

The foregoing estimates do not include movements of dependents traveling on the passports of adults they are accompanying. These are not used in preparing the returns of the immigration authorities. According to the present study, there were net inward movements of dependents in 1953 and 1954, amounting to 160 and 120 respectively, whereas in 1955 departures and arrivals were about equal. The net inward movement of 280 over the three-year period is however too small to alter the estimates appreciably.

CHAPTER 9

CONCLUSION

It is now necessary to draw together the threads of the foregoing discussion of the migration streams and in particular the analyses of the impact of emigration on the rates of growth of the population and on the size, structure and growth prospects of the labour force.

Permanent additions to the population resulting from migration have been small, and cannot be said to have any marked effects on population growth. The small number of immigrants coming to seek work in the island however have an important influence on certain sectors of the labour force. It is clear from an analysis of the occupational structure of the inward stream that, although immigration in no way tends to offset the losses to skilled and unskilled classes resulting from emigration, it constitutes an important source of increment to the more highly placed personnel, especially the professional and managerial classes.

It is of course with the outward movement that this study is mainly concerned. Though a variety of interesting features emerges from the analysis of departures, the main aspect remains the development of the movement to the United Kingdom. This emigration gained momentum in 1953 and 1954 when monthly rates of increase were between 10 per cent and 13 per cent. Though the monthly rate of increase fell markedly in 1955, it was within this year that the movement reached its highest point, monthly losses to the population averaging 900 males and 510 females, as compared with 110 males and 70 females in 1953. In the initial year the movement involved for the most part skilled workers, but it appears that this aspect of emigration was approaching its maximum at the end of 1955, and that a levelling off, if not a definite decline, of emigration of skilled workers may be witnessed in 1956. On the other hand the unskilled workers were much less involved in 1953 and 1954, but began leaving the island in greatly increasing numbers in 1955. Indeed the evidence is that the movement of these classes will continue to increase during 1956. Concurrently with the expansion of emigration of the unskilled there has been a spread of the movement to cover people from all rural parishes, and a growing proportion of illiterates. It is thus clear that 1956 will probably witness a marked change in the composition of the outward migration stream.

The effects of emigration on the growth of the island's population are noticeable. Thus the net increment to the population from all sources fell from 33,100 in 1953 to 23,000 in 1955. Whereas in the former year the annual rate of increase stood at 2.2 per cent, the emigration of 1955 forced this down to 1.5 per cent. Net emigration in 1955 amounted to 17,000, which is more than twice that prevailing during 1911-21, a period marked by exceptionally

high emigration. However, because the level of natural increase during recent years is much higher than that prevailing in 1911-21, net emigration during 1955 accounted for only 43 per cent of the natural increase, whereas the corresponding proportion in 1911-21 was 74 per cent. Treating emigration as a source of decrement we can estimate the extent to which it tends to depress the capacity of the population to replace itself. Whereas a consideration of fertility and mortality alone gives a net reproduction rate of 1.82 for the period under review, the incorporation of emigration rates of 1955 as a source of decrement reduces this to 1.41 or by 23 per cent.

The effects of emigration on the labour force of Jamaica are much more impressive and much more easily demonstrated than its effects on the size, composition and growth prospects of the population as a whole. In particular its impact on the skilled classes of the labour force is marked. Thus in 1955 rates of emigration exceeded 20 per cent in the case of masons, and were between 10 per cent and 20 per cent among carpenters and mechanics. Indeed the suggestion is that such were the inroads made into the ranks of the so-called skilled classes by emigration that between 1953 and 1955 many of these classes must have declined appreciably in number. It will be recalled that, in making estimates of the numbers in the 18 occupational classes, the crude assumption was made that, within the three-year period under review, the labour force in general should, in the absence of migration, increase by 2.4 per cent per year in the case of the males and by 2 per cent per year in the case of the females. It is therefore instructive to see how the gross rates of emigration compare with these assumed rates of increase.

We consider first the position of the males. For this sex gross rates of emigration exceeded 2.4 per cent in the initial year (1953) in the case of two occupational classes, mechanics and professionals, while the rate shown by masons was nearly 2.4 per cent. In 1954 nine occupational classes showed rates of emigration in excess of 2.4 per cent: carpenters, masons, mechanics etc., other skilled and semi-skilled workers, clerks, personal service workers, tailors, civil servants and professionals. By 1955 only six occupational classes showed rates of emigration below 2.4 per cent: planters, farm workers, unskilled labourers, executives and managers, domestic workers and the miscellaneous occupational class of code 18. When it is recalled that rates of immigration attained sizeable proportions only among three occupational classes of the males in the labour force — executives and managers, teachers and professionals — it will be realized how many classes of the labour force were appreciably affected by emigration, especially after 1954.

It has been emphasized that the female labour force is affected in a way markedly different from that observed in the case of the males, and this difference is further illustrated by comparing the several rates of emigration given in Chapter 6 with the assumed annual rate of growth of this part of the labour force in the absence of migration (2.0 per cent per year). In 1953 five occupational classes showed rates of emigration exceeding 2.0 per cent:

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clerks, dressmakers, nurses, professionals and the miscellaneous class of code 18. In 1954 seven occupational classes showed rates above 2 per cent, the five enumerated for 1953 as well as personal service workers and teachers. In 1955 yet another occupational class showed rates in excess of 2 per cent, senior persons in trade and industry, thus bringing to eight the classes being depleted at a rate greater than their rate of recruitment. As here again immigration was of very small importance, being over 1 per cent only among the professional class and the miscellaneous class of code 18, it remains evident that emigration sufficed to influence appreciably the growth of the female sector of the labour force.

The effects of emigration are also well brought out by comparing the numbers leaving the island with the numbers estimated to enter the labour force annually. Thus among the skilled classes of the (male) labour force the emigration in 1953 (1,150) was equivalent to 38 per cent of the estimated total accessions during that year. By 1955 the total emigration of skilled workers (6,560) was more than twice the estimated number of accessions. Though similar comparisons in the case of the unskilled classes show these to be much less affected, here also emigration evidently tended to offset much of the total estimated recruitment. Thus in 1954 the emigration of 1,300 unskilled workers amounted to 18 per cent of the accessions, while the appreciable rise of emigration in 1955 to 3,730 meant that the gross loss amounted to half of the estimated accessions. Even among the other classes of the labour force emigration constituted a sizeable amount compared with the annual accessions. In 1954 the emigration of 940 was equivalent to nearly one-third of the estimated accessions, while the emigration of 1,320 in 1955 was equivalent to 43 per cent of the accessions.

Though immigration appears as a source of increment of considerable importance among some of the more highly paid classes of the labour force -- especially among professionals, civil servants and managers -- it remains clear that the net effect of migration is a tendency to reduce the size of the labour force, particularly its skilled sectors. In fact the present crude estimates suggest that, in view of the prevailing rates of net emigration for the entire labour force, declines in many classes were inevitable. In summary it appears that net rates of emigration for males moved up from 3.9 per 1,000 in 1953 to 14.1 in 1954 and to 27.8 in 1955. In the case of the females net rates of emigration rose from 5.0 per 1,000 in 1953 to 13.6 in 1954 and to 26.5 in 1955. It is estimated that between 1953 and 1955 masons, mechanics, electricians and carpenters show appreciable reductions in numbers. On the other hand the effects of emigration on the size of the unskilled classes are much less marked, for in no case does it suffice to cause any reductions in numbers, though the rates of increase are appreciably reduced.

In more general terms the net effect of emigration can be illustrated by considering the several sources of increment and decrement to the male labour force over the three years 1953-55. Though total increments, composed

mostly of accessions, remained almost constant, the total decrement, strongly influenced by the rising tide of emigration, was by 1955 sufficient to offset entirely the increments and thus to result in a small decline in the labour force. Thus, considering the span 15-64, we note that the net gain of 8,700 shown in 1953 was by 1955 reduced to a net loss of 700. In short the rate of increase of 2.3 per cent in 1953 was by 1955 converted to a rate of loss of 0.2 per cent.

It is not only in terms of its effects on the actual size of the working force that emigration demands attention. The age schedule of rates of emigration is such as to result in a marked reduction in the contribution of the average worker to the island's labour potential. If we consider within the age range 15-64 the experience of a cohort of workers subject to rates of mortality and retirement of 1953-4, it appears that the average worker coming under observation at age 15 can expect to spend 43.7 years in gainful employment. However if an additional source of decrement in the form of emigration at the rates of 1955 is introduced, then the contribution of the average worker is drastically reduced. On this basis the average years in the labour force, to a male at age 15 falls to 22.9 years or just above half of the value obtained on the assumption that no emigration takes place. It is of importance to note that most of this reduction is effected between the ages of 35 and 65, an inevitable consequence of the pattern of age-specific rates of emigration. Thus whereas the average number of years lived during the span 35-65 is, in the absence of emigration, 24.2 years, emigration reduces this figure by about two-thirds, for the average number of years lived amounts to 8.1.

Though the study of the monetary implications of emigration remains an integral part of the wider economic problem of the impact of the movement on the overall economic situation of the island, it is still possible in terms of the present limited analysis to give some suggestion as to the possible financial implications of a reduction of 48 per cent in the contribution of the average worker to the potential labour force of the island, gauged in terms of the number of years lived between 15 and 65. Approaching this problem by use of the concept of the money value of a man, we estimate that the average gross discounted earnings per worker, measured on the basis of a cohort coming under observation at age 20 and being employed up to age 64, is £23,370. However, on the introduction of emigration as an additional source of decrement the gross discounted earnings per person falls to £1,770. Thus from another standpoint it can be said that emigration reduces the contribution of the average worker by 48 per cent, and it is again clear that most of this reduction results from the fact that most of the emigration takes place in the age range over 30, where wages are highest.

The analysis of the effects of emigration has been pushed further in order to assess its effects on the capacity of the male labour force to build up itself. It is estimated that in the absence of emigration the capacity of this sector of the labour force to replace itself can be summarized in an index of 1.48, signifying an increase of nearly one half in about 19 years. The introduction of

emigration as a source of decrement affects this appreciably, but still indicates an index of replacement of 1.35. The reduction of 9 per cent is not in keeping with what we should expect on the basis of the considerable reductions implicit when the effects are assessed in terms of years of life spent in the labour force or gross discounted earnings per worker. However the seeming paradox presented here seems explicable in terms of the particular pattern of age-specific rates of emigration. Whereas most of the accessions to the labour force take place at ages below 25, most of the losses due to emigration take place at ages over 25. So that unless there is a marked change in the age pattern of emigration it remains highly unlikely that it will have any profound effect on the inherent capacity of the labour force to replace itself. Indeed measures of replacement give an unduly favourable picture of the effects of emigration.

Another problem relevant to an assessment of the effects of emigration is the accumulation of workers abroad, and some attention has been directed to this also. Though in many respects remote from reality and not amenable to extended statistical treatment in view of the short period covered by the recent migratory movement, the assumption of the continuation of emigration at the rates of 1955 enables us to see what may happen in terms of a build-up of workers abroad. This is of some importance because it cannot be overlooked that any severe recession in the United Kingdom may result in the return of many workers to Jamaica. It is clear that the rates of emigration obtaining in 1955 are of an order which can result in the accumulation of large numbers of Jamaicans abroad, so that even a very small proportion of these returning will mean considerable increments to the estimated numbers of workers in the island.

In Chapter 7 a brief analysis has been presented of the effects of emigration as a source of separation, based entirely on the experience of 14 sugar factories during 1955. Emigration constitutes a substantial part of total separations. Nearly all the separations in the case of process workers, 38 out of 43, are ascribed to emigration, while for mechanics and tractor drivers emigration, it is reported, accounts for 65 per cent of total separations. It is clear that emigration influences the overall rates of separation in the case of all the 12 occupational categories. The highest rate of emigration is experienced by welders (196 per 1,000), while tractor drivers and mechanics also experience substantial depletions as a consequence of emigration, the rates for these being 132 and 127 respectively. The data obtained from the sugar industry can also be considered in terms of the 14 units submitting information. Here there is also evidence that separations due to emigration govern to some degree the overall rates of separation shown by these factories in 1955.

From the reports given by these 14 sugar factories it is clear that the great number of separations resulting from emigration have resulted in difficulty in obtaining workers; 36 reports of such difficulties in recruiting these occu-

pational categories have been made. This is most marked among mechanics and electricians. Similarly the reports show that a number have experienced deteriorations in the quality of work performed; 50 reports of deteriorations in the quality of work performed in various occupations have been made. Again mechanics is the category most frequently mentioned. It is of interest to note that the sugar industry data on difficulty of recruitment and quality of work performed, when ranked, show a positive correlation ($\tau = +.70$). The association between the rates of emigration and these reports of difficulties of recruitment and of deterioration is also of interest; the information when ranked, once more shows appreciable measures of correlation.

Limited though this analysis of the sugar industry data remains, it seems to indicate that emigration of skilled workers has definitely had marked effects on the supply of these and that as a consequence the workers now being recruited are, in many occupational categories, of inferior standard.

Although the collation process could not be carried as far as was hoped, the work done on this is still of some value. It indicates that so far the number of emigrants to the United Kingdom who have returned to the island has been small. Of the total males emigrating between 1953 and 1955 only 550 returned, equivalent to 2.8 per cent of the total male departures. Over the same period, 450 females returned, that is 3.8 per cent of total female departures in search of work.

The collation process has shown that the number of departures on holiday secured from the migration cards is subject to much greater error than departures in search of work. By dividing the departures of the former type into matched and non-matched groups, it is possible to arrive at new estimates of permanent emigration from the island. These differ only slightly from the estimates used in this analysis, thus confirming that in order to trace permanent emigration to the United Kingdom the purpose of visit entered on the migration card is satisfactory.

Some Wider Implications of Emigration

We have indicated in the course of the previous chapters that some of the analyses used to illustrate the effects of emigration on the population of the island and on its labour force call for qualifications of various kinds in view of the many over-simplifications involved. Indeed we emphasized that the statistical approaches of Chapters 5 and 6 should not be taken as indicating that we are dealing with fully determinate problems amenable to easy statistical elucidation. In seeking to place the basic findings in a wider perspective we shall consider in turn the implications of emigration for population growth in general and its effects on the labour force.

Each of these two aspects of emigration has its relevance to the island. Emigration considered as a determinant of population growth is in fact part of the wider problem covering the approach to the curbing of population growth, or in general of seeking to effect a more satisfactory balance between population growth and utilization of natural resources. The impact of

emigration on the labour force can also in one sense be taken as constituting one aspect of the approach to the problem of effecting a better balance between population and resources, especially when this pressure takes the form of heavy unemployment. But there is a more fundamental consideration in terms of which emigration of labour force components can be viewed; it can be viewed, and this is the analysis employed in Chapter 6, as a powerful means of depleting the labour force. In one sense these two aspects of emigration are complementary, especially where heavy unemployment is involved. But it is important to note that the two may have offsetting or compensating effects on the population. For where a country is pursuing a programme of economic development, whether or not the latter is geared to a policy aimed at influencing population control, emigration, particularly of skilled workers, may gravely hamper the fulfilment of these plans. The implications of emigration are in fact much wider than the strictly demographic analysis of Chapter 6 suggests.

In many of the so-called underdeveloped countries, characterized by high densities of population and by general imbalance between population and resources, efforts are being directed towards the search for means to curb population growth with a view to improving the general economic and social conditions of the people. And emigration presents itself as one contribution to this approach, though it is widely held that it is unlikely to constitute a powerful curb on population growth for any extended period. If therefore we assume that Jamaica, with a density of 350 per square mile, a natural increase of 2.5 per 1,000, a low proportion of cultivable land, and a gross domestic product of £65 per head falls definitely within the category of countries with a marked imbalance between population and resources, then the present emigration can usefully be discussed as a determinant of population growth (23).

It is instructive to recall that emigration has played an important role as a determinant of population growth in the West Indies in the past. Between 1881 and 1921 nearly every West Indian territory experienced some emigration. And with the low rates of natural increase then prevailing the relatively low rates of emigration sufficed to influence powerfully the whole pattern of growth of population in the region. Though most islands of the Eastern Caribbean (Trinidad being the outstanding exception) experienced declines in their population as a result of emigration, Barbados provides the fullest indication of the power of emigration to limit population growth. Here low rates of natural increase after 1871 coupled with emigration which ranged from 0.5 to 1.6 per 1,000 of the population sufficed to induce a marked reduction in population growth. Indeed between 1891 and 1921 the population of the island declined from 182,900 to 156,800 (17). Thus emigration resulted in the reduction of the population of the island to a level only slightly above that prevailing in 1861. Emigration from Jamaica did develop after 1881, but it never attained rates comparable to those affecting Barbados. Throughout the period (1881-1921) emigration from the island influenced intercensal

rates of growth; indeed it was instrumental in reducing growth rates in 1911-21 to 3.2 per 1,000, the lowest ever experienced by the island during the century following 1844.

Modern writers hold different views on the power of emigration to influence population growth. Some hold that emigration can have no lasting effects on the population of the so-called underdeveloped countries; for the removal of a group of persons from a poor and underdeveloped community creates conditions conducive to increased rates of growth, with the result that soon the old density and pressure of population on resources again assert themselves. Such extreme views are unacceptable, though they have the merit of pointing out the dangers of expecting too much from emigration. The more generally accepted view is that emigration can have a pronounced effect on population growth, though evidently a distinction has to be drawn between the effects of emigration on the capacity of the population to reproduce itself and its effect on the actual size and composition of the population. The former can be approached through the conventional analyses presented in Chapter 5. But the latter calls for detailed computations designed to show how outward movements affect the population from one period to another.

Making certain assumptions concerning migration (and complementary ones in respect of mortality and fertility) we can project the population of the island into the future and gain some idea of the possible effects of emigration as a means of retarding population growth. Two computations of this nature, made for a recent study of Jamaica, are relevant to the present discussions as they show that emigration spread over a period of about fifteen years, and involving an annual loss to the island of about 12,000 persons, can have a measurable influence on population growth (18). The results of the two projections are summarized in Table 9A.

TABLE 9A. POPULATION ESTIMATES OF JAMAICA, ACCORDING TO TWO PROJECTIONS

Year	Male Population, Assuming:		Female Population, assuming:	
	No Emigration	Emigration	No Emigration	Emigration
1951	695,100	695,100	734,700	734,700
1956	781,100	778,400	819,300	816,700
1961	877,200	832,900	915,000	870,800
1966	985,100	887,600	1,022,600	925,100
1971	1,107,300	944,200	1,144,700	981,400

The effects of emigration on population growth are here reinforced by an assumption of declining fertility. Still the computations emphasize that emigration can have some marked effects on population growth. It remains evident however that a rate of emigration of about 1 per cent cannot by itself induce any drastic declines in population growth, though when accompanied by a decline in fertility (as is here assumed) it must have some effect on growth rates.

Discussions of the effects of emigration on the labour force must of necessity remain somewhat hypothetical. In Chapter 2 attention was drawn to the

paucity of the data on many aspects of the population and economy of the island which are essential for any realistic appraisal of the effects of emigration. One of the elements of uncertainty is the level of unemployment and under-employment prevailing. It is generally conceded that unemployment is appreciable, but its incidence among the skilled and the unskilled components of the labour force is unknown. The complex nature of much of the labour supply situation in Jamaica emerges from M. G. Smith's recent study (21). It is equally difficult to obtain any idea of the employment status of the emigrants themselves. Maunder, who studied this problem, concluded that it was largely indeterminate, but indicated that his data suggested an overall figure of unemployment of 18 per cent for all types of emigrants (9).

Manifestly the employment status of the population would materially influence the impact of emigration on the island's labour force. No exhaustive discussion of this impact is attempted here. But it is useful to consider briefly the situation as it affects 1955, in terms of the skilled and unskilled sectors of the labour force. In considering the skilled workers two conditions can be distinguished: full or near-full employment, and appreciable unemployment.

The assumption of full or near-full employment in the skilled sectors of the labour force seems acceptable for 1955. Investment in the form of new construction covering buildings and public works of all types rose from £3.6 million in 1950 to nearly £10 in 1955 (4). A considerable number of new manufacturing industries has been established during the past ten years. These developments together with the establishment of the bauxite industry must have resulted in a marked rise in the demand for skilled workers. If there were full employment in the ranks of skilled workers emigration would inevitably have immediate effects on their supply.

This is in effect the main point of the analysis of Chapter 6, which throughout implicitly assumes the non-existence of unemployment. At the same time it must be emphasized that the characteristics of the skilled workers of the island must have under such conditions tended to offset the drain on these sectors of the labour force, by forcing up the rates of accession into the occupational categories experiencing heavy losses due to emigration. As has already been noted, the term skilled worker does not have the same connotation in Jamaica as it has in most industrialized countries. In general there is no scheduled period of apprenticeship before a worker can claim to have attained competence in his particular occupation. Indeed many make their living by engaging in different types of occupation. Thus the borderline between carpenters and masons is not clearly drawn while the division between mechanics and electricians is sometimes equally indefinite. So that a rise in the accessions to particular skilled occupational groups in response to an increase in demand would seem possible, though the newcomers may show much lower levels of competence than those whom they replace. One of the chief complaints of the sugar industry, it will be recalled, is that

there has been deterioration in the quality of new workers in occupational categories which have been most depleted by emigration. However it must be stressed that emigration of skilled workers in 1955 was, according to the estimate of Chapter 6, more than twice the number recruited. It is most unlikely that recruitment of new workers into skilled groups could have been doubled in a period of less than three years, particularly as there are very few schemes for training skilled workers in the island. So that even if there were considerable shifts from the unskilled to the skilled sectors during 1955 they doubtless could not have wholly relieved the shortage implied by the analysis of Chapter 6. If there was in fact full or near-full employment among skilled workers, in 1955 emigration must have resulted in a marked shortage of skilled workers or a marked deterioration in their quality, or both. There is no escape from the fact that a deterioration in quality of workers is the price at which numbers can be maintained under the conditions of heavy emigration and inadequate training facilities.

On the other hand if we make the less realistic assumption that there was appreciable unemployment among the skilled workers in 1955, then evidently the depletion in their numbers through emigration would not have had the same effect. However on the basis of Maunder's estimate of an overall proportion of unemployed among emigrants of 18 per cent, and from indirect evidence of the present study, it seems safe to argue that most of the skilled workers emigrating were not drawn from the ranks of the unemployed. In whatever proportions the unemployed and the employed were represented in the outward stream however, there must have been some depletion in the numbers available for work. And, even if we assume that unemployment among skilled workers was at a level of 10 per cent, the high rates of emigration experienced by them (93 per 1,000) must inevitably have made for serious difficulties in recruitment.

Whether we assume a high level of employment among the skilled workers, as seems more realistic, or whether we assume some appreciable degree of unemployment, which seems less realistic, the fact remains that a depletion in the numbers and quality must have taken place.

It is almost certain that unemployment was much higher among the unskilled than among the skilled. Nevertheless the problem of the depletion of this sector of the labour force does not present itself in the light of a severe depletion of numbers. For whereas in 1955 the total emigration among this sector of the labour force was 3,700, the estimated accessions were nearly twice as large as this. However one aspect of this movement, stressed in Chapter 4, must be noted; it turns on the fact that most of the unskilled workers are now being drawn from the rural areas. Thus to the known appreciable losses being experienced by the rural areas as a result of out-migration are now added appreciable losses due to external emigration. In fact the depletion of the rural labour force by the movement may be the most significant aspect of the effects of emigration on the unskilled sector of the labour force.

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Just as emigration tends to reduce the size of the population at large so also it tends to reduce the size of the labour force. And the distinction between the effects of the movement on the size of the population and on its capacity to replace itself has its counterpart in any discussion of the implications of emigration for the labour force. It is quite possible for the size of the labour force to be reduced, though its capacity to replace itself may be only slightly curtailed. This once more is possible because of the age distribution of the emigrants.

Considerations of the capacity of the labour force to replace itself remain somewhat remote from reality, but the implications of emigration for movements in the size and composition of the island's population are important. The best means of considering the possible implications of emigration in this light is to follow through one or more projections of the population incorporating assumptions as to future external migration. The study of Jamaica already referred to presents two projections and on the assumptions of constant participation at the rates of 1943 gives estimates of the gainfully employed. It is instructive to compare the results of these two projections, since one incorporates a specific assumption of emigration consisting mainly of the gainfully employed. It assumes a net outward movement of 12,000 per year between 1956 and 1971. This number is larger than the net emigration from the island in 1954 (8,900), but smaller than that of 1955 (17,600). The results of the two computations are summarized in Table 9B.

TABLE 9B. ESTIMATED NUMBERS GAINFULLY OCCUPIED, ACCORDING TO TWO ASSUMPTIONS

Year	Males, Assuming:		Females, Assuming:	
	No Emigration	Emigration	No Emigration	Emigration
1956	418,000	418,000	209,000	209,000
1961	446,000	447,000	230,000	222,000
1966	520,000	482,000	254,000	236,000
1971	585,000	524,000	283,000	255,000

The power of emigration to deplete the labour force of Jamaica if continued over any length of time is evident from these projections. Thus on the assumption of no emigration the male labour force of the island in 1971 amounts to 585,000 and that of the female to 284,000. These exceed the corresponding estimates on the assumption of emigration by 61,000 and 28,000 respectively. It can therefore be inferred that emigration at a much lower level than that prevailing in 1955 would, if continued for fifteen years, cause a loss of about 89,000 workers. If it is arbitrarily assumed that emigration over this period involves a proportion of skilled male workers equal to that prevailing in 1955, we can say that the cumulative loss to the island's pool of skilled workers would be about 34,000. To appreciate what this implies it must be recalled that according to our present estimates, there were about 63,000 skilled males in the labour force in 1955.

The general implications of emigration can be still more clearly defined by estimating the possible effects of the continuance of emigration at the

1955 level. It is unlikely that the outward movement can continue at this level for any extended period, but such an assumption shows to what extent high rates of loss can deplete the potential labour force of the island. Two estimates of the future population of males aged 20-64 are presented in Table 9C., one resting on the assumption of continued emigration at the 1955 level for ten years, and the other that over the same period no emigration is experienced.

TABLE 9C. EFFECTS OF EMIGRATION ON MALE POPULATION OF WORKING AGE, 1955-65

Age Group	1955 Population	Estimated Population at 1965 Assuming:	
		Emigration	No Emigration
20-24	68,200	72,800	81,600
25-29	52,900	54,100	72,500
30-34	45,700	41,400	65,900
35-39	45,000	32,400	50,900
40-44	41,600	30,600	43,500
45-49	36,700	32,000	41,800
50-54	32,400	31,100	37,700
55-59	23,500	28,600	32,100
60-64	16,000	24,900	26,500
Total 20-64	362,000	346,900	452,500

On the assumption of unchanging mortality and no emigration the male population of working age increases from 362,000 in 1955 to 453,000 in 1965. When the assumption of emigration is introduced, however, the estimate for 1965 is only 347,000, that is actually 15,000 less than the corresponding number in 1955. Emigration affects all age groups over 20, but those of 30-34 and 35-39 show the greatest reductions, the 1965 figures being about 36 per cent lower than they would be on the assumption of no emigration. Moreover, it is of interest that, with the exception of males under 30 and those over 55, the reduction in numbers between 1955 and 1965 is general. In other words, emigration at the 1955 level drastically depletes the male population of working age.

Thus against the picture of emigration as an agent for the reduction of population pressure, particularly as it tends to reduce the numbers in the ranks of those of working age, must be placed the picture of emigration as a source of depletion of the most valuable section of the labour force. This seriously impinges on the prospects of economic and industrial development of the country. For Jamaica, like most of the so-called underdeveloped countries, is but modestly supplied with skilled workers. Thus the possibility of unplanned emigration grossly depleting the future supplies of skilled workers has to be reckoned with. And in the present state of the island's development it has to be carefully weighed whether emigration of the type now in progress, even if it does contribute to the reduction of population growth, is an unqualified advantage to a country crying aloud for industrial development. Here in fact we are faced with the issue of the relevance of a unitary approach to the entire problem of population policy.^a

^aThe relevance of a unitary approach to questions of population policy, as they relate to the West Indies, is discussed in G. W. Roberts (19).

There is a further aspect of the implication of emigration which should be placed in wider perspective than was possible in the analysis of Chapter 6, the monetary effects of the movement. There it was shown that emigration at the rates of 1955 constituted a sizeable reduction in the average gross future earnings per worker attaining age 20. However there is a compensating factor tending to reduce this, the remittances made by emigrants from their country of adoption to residents in the sending country. These tend to some degree at least to offset the loss implied in the conventional calculations of the type presented in Chapter 6. The analysis of emigrants' remittances was not included in the study, but figures obtained from the Post Office, which are given in Table 9D, emphasize that appreciable sums are being received in Jamaica from emigrants now resident in the United Kingdom. Estimated net remittances to Jamaica increased about six times between 1952 and 1955, from about £240,000 to over £1,400,000. It also appears that further sums reach the island in the form of Bank of England notes sent in letters to persons resident in Jamaica, though it is not possible to get any indication of the order of magnitude of these additional remittances. As is well known, it has long been a characteristic of West Indians emigrating to foreign countries to remit portions of their earning to relatives in their native country, and the present movement to the United Kingdom would seem to conform to this pattern.

TABLE 9D. NET REMITTANCES FROM THE UNITED KINGDOM BY POSTAL ORDERS AND MONEY ORDERS, 1952-55

Year	British Postal Orders Paid in Jamaica	U.K. Money Orders Paid in Jamaica	Total	British Postal Orders Sold in Jamaica	Net Remittances
1952	275,900	39,700	315,600	74,600	241,000
1953	324,200	42,700	366,900	88,500	278,400
1954	528,700	81,100	609,800	99,100	510,700
1955	1,314,100	194,000	1,508,100	107,200	1,400,900
Total	2,442,900	357,500	2,800,400	369,400	2,431,000

Note. Postal orders paid in Jamaica may have been issued in Jamaica or abroad, postal orders sold in Jamaica may have been cashed here or abroad. The differences between these two sums thus give rough indications of the level of remittances by postal order from the United Kingdom.

However against these receipts must be set the cost of passages, which, because the carriers are foreign-owned, constitute an immediate loss to the island. In fact, it appears that the remittances considered above serve in part at least to finance the passages of relatives intending to emigrate or to repay loans on the strength of which emigrants had previously secured passages. Passages to the United Kingdom now cost about £85 by air and £75 by sea. But not all of these sums can be taken as expenses to the island, since part of the cost of the passage represents the commission of the travel agent. It is arbitrarily assumed that emigration to all countries involves a true loss to the island of £70 per head. If in other words the cost of passage is restric-

ted to the sum accruing to owners of aircraft and surface vessels, then the expenses of emigration can be estimated. Thus the overall expenditure in transporting all the permanent emigrants from Jamaica in 1953-55 was probably of the order of £2.2 million, while in 1955 alone the sum probably reached £1.3 million.

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APPENDIX I

INFORMATION ON EMBARKATION/DISEMBARKATION CARD

1. Name in full.....
(In block letters)
2. Date of birth.....
(Date) (Month) (Year)
3. Place of birth.....
4. Sex.....Marital Status.....Single.....
5. Nationality.....
6. If naturalized.....
(Place) (Date)
7. Occupation.....
8. No. and nationality of passport.....
9. Issued at.....
10. Names and ages of accompanying dependents under 15 years.....
.....
11. Permanent address.....
12. Name and address of nearest relative or friend in country of domicile
.....
13. Name and address of nearest relative or friend in country of disembarkation
.....
14. Proposed address during stay.....
15. Airline/Vessel.....
16. Flight.....
17. Point of { Disembarkation
Embarkation
18. Proposed length of stay.....
19. Purpose of visit.....
20. Signature of passenger.....

(OFFICIAL USE ONLY)

Place Date

Permitted to enter for

Remarks

Signature of I.O.

APPENDIX II

COPYING AND CODING INSTRUCTIONS

Column		
	Enter surname and initials	00
1	Departure or arrival: Code 0 for departure and X for arrival	01
2	Sex: Code 1 for male, and 2 for female	02
3-4	Year of birth: Enter last 2 digits of year born	
5	Marital Status: Code married 1, single 2, divorced 3, widowed 4	03
6-7	Place of birth: For natives code for parish 01, 02 . . . 15; for foreign born code from 20 . . . 26 (see detailed code for country of birth)	04
8-9	Nationality: Code 01 for British and as in 6-7 for aliens	05
10-11	Occupation: Copy exactly as given	
12-19	Number of passport: Enter as given, omitting letter, if any; for/or — enter Code X	06
20-21	Country of issue of passport: Code Jamaica 01, and as in 6-7 for other countries	
22-24	Date of issue of passport: Code months 1 . . . R (see detailed code of months and last two digits of year)	
25	All dependents.	
26	Number of dependents under 10	
27	Number of dependents 10-14	
28-29	Permanent address: Code as in 6-7	07
30-31	Country of origin or destination: Establish from internal evidence (address, mode of travel, name of ship, etc.) what exactly is ultimate destination, especially in case of persons going to Europe and America. Code as in 6-7 according to country of origin or ultimate destination.	08
32	Port of entry or exit: Code Kingston or Palisadoes 1, etc. (see detailed code of ports)	09
33-34	Date of arrival or departure: Code months 1 . . . R as in 22-24, and years 3, 4, and 5	
35	Sea or air: Code aircraft 1, surface vessel 2	10
36	Purpose of visit: Use this and evidence on card to code type of migrant 1, 2 . . . 6 (see detailed code of type of migrant)	
37	Proposed or permitted length of stay: Enter in months	
	Under 6 months 1 1 year and over 3	
	6 months to 1 year 2 Not stated X	11

CODE FOR PLACE OF BIRTH, COUNTRY OF PASSPORT AND POINT OF EMBARKATION/DISEMBARKATION

Kingston	01	Parish Unknown	13	
St. Andrew	02	St. Catherine	14	13
St. Thomas	03	Clarendon	15	
Portland	04			14
St. Mary	05	United Kingdom	20	15
St. Ann	06	United States of America	21	
Trelawny	07	Canada	22	
St. James	08	British Caribbean	23	16
Hanover	09	Latin America	24	
Westmoreland	10	Other countries	25	17
St. Elizabeth	11	Cayman and Turks Islands	26	
Manchester	12			

CODE OF PORTS IN JAMAICA

Kingston or Palisadoes	1
Montego Bay	2
Port Antonio	3
Port Kaiser	4
Ocho Rios	5
Long Wharf, Old Harbour	6
Rio Bueno	7
Oracabessa	8
Savanna-la-Mar	9
Salt River	0

CODES FOR DATE OF MIGRATION, 1953-55

Month of year	Code
January	1
February	2
March	3
April	4
May	5
June	6
July	7
August	8
September	9
October	0
November	X
December	R

CODE FOR PURPOSE OF VISIT OR TYPE OF MIGRANT

To seek new employment	1	
To study	2	
To seek medical aid	3	20
For vacation	4	21
For business reasons	5	22
For other reasons	6	23
Accompanying or going to join wife/husband	7	Note

APPENDIX III

OCCUPATION CODES

- 00 SEAMEN
- 01 PLANTERS AND AGRICULTURISTS
- 02 FARMERS AND FARM WORKERS
-
- 03 CARPENTERS, RIGGERS
- 04 MASONS AND ALL WORKERS IN CONCRETE, TILES AND BRICKS
- 05 MECHANICS, CHAUFFEURS & ELECTRICIANS: BLACKSMITHS, PLUMBERS:
Includes all skilled or semi-skilled persons working in metal.
- 06 OTHER SKILLED AND SEMI-SKILLED WORKERS:
Includes airline hostesses, telephone operators, telegraph clerks, dental technicians, factory workers, bakers, cabinet-makers, painters, printers, potters, coopers, renovators, jewellers, shoemakers, contractors, builders, surgical and X-ray technicians, in trade, industry and commerce and hotel establishments.
renovators, jewellers, shoemakers, contractors, builders, surgical and X-ray technicians maintenancemen, millwrights.
- 07 GENERAL UNSKILLED LABOURERS
-
- 08 SHOP WORKERS; CLERKS, STENOTYPISTS, CASHIERS AND SECRETARIES:
Includes only low grade clerical and general workers in trade, industry and commerce.
- 09 SENIOR PERSONS ENGAGED IN TRADE AND COMMERCE:
Includes salesmen, insurance canvassers, brokers, accountants, storekeepers, grocers, merchants and all higher grade employees in trade, commerce and industry.
- 10 EXECUTIVES AND MANAGERS:
Includes company directors, manufacturers' representatives and all high executives in trade, industry and commerce and hotel establishments.
-
- 11 DOMESTIC WORKERS:
Includes domestic servants, nursemaids, cooks and butlers.
- 12 EMPLOYEES IN PERSONAL SERVICES:
Includes workers in hotels and laundries, beauticians, hairdressers, barbers, caterers.
- 13 DRESSMAKERS, TAILORS AND CLOTH DESIGNERS:
Includes hatters and all workers connected with clothing.
- 14 NURSES AND MIDWIVES
- 15 TEACHERS:
Includes school teachers only, excludes university staff.
- 16 CIVIL SERVANTS OF ALL CLASSES:
Includes sanitary inspectors.
- 17 PROFESSIONAL WORKERS OF ALL CLASSES:
Includes doctors, lawyers, clergymen, engineers, chemists, professors, and lecturers, and generally all highly trained or qualified persons and laboratory technicians.
- 18 OTHERS IN WORKING FORCE:
Includes artists, social workers, missionaries, policemen, journalists, photographers, supervisors, overseers and in general all ill-defined types.
- 19 NO OCCUPATION STATED:
Includes those who seem to be potential members of the working force.
-
- 20 HOUSEWIVES
- 21 STUDENTS
- 22 YOUNG CHILDREN
- 23 OTHERS NOT IN WORKING FORCE:
Includes gentlewomen.

Note: No tabulations of seamen (code 00) were made because of the very frequent movements experienced by this group and because the great majority of them were permanent residents of Jamaica.

APPENDIX IV

METHOD OF ESTIMATING RATES OF RETIREMENT FROM THE
LABOUR FORCE

The rates of labour force participation, applied to the stationary population of the male labour force (${}_5L_x$) give estimates of the labour force component of the stationary population (${}_5L'_x$). The latter can be used as a basis for deriving the required rates, which are calculable only for ages over 40. Writing the composite rate of separation (from mortality and retirement) experienced by the labour force component of the stationary population in a 5-year interval as ${}_5Q''_x$, we have

$${}_5Q''_x = 1 - \frac{{}_5L'_{x+5}}{{}_5L'_x}$$

Comparable rates due to mortality alone, say ${}_5Q_x$, are

$${}_5Q_x = 1 - \frac{{}_5L_{x+5}}{{}_5L_x}$$

If the rate of retirement embodied in ${}_5Q''_x$ is treated as an extra risk, say ${}_5R_x$, then the three rates of decrement can be assumed to be related in the following way

$${}_5Q''_x = 1 - (1 - {}_5Q_x)(1 - {}_5R_x)$$

Therefore

$${}_5R_x = \frac{({}_5Q''_x - {}_5Q_x)}{(1 - {}_5Q_x)}$$

The rate of retirement thus derived is, like the rate of mortality ${}_5Q_x$, an independent rate and thus not immediately applicable to a population subject to the two rates of decrement. The two must therefore be converted into dependent form before they can be applied to a population. The dependent forms for the rates of retirement and mortality, say ${}_5\bar{R}_x$ and ${}_5\bar{Q}_x$ respectively, can be approximated as follows.

$$\frac{{}_5R_x}{5} = \frac{{}_5R_x}{5} (1 - \frac{1}{5} {}_5Q_x)$$

$$\frac{{}_5Q_x}{5} = \frac{{}_5Q_x}{5} (1 - \frac{1}{5} {}_5R_x)$$

The rates of retirement are applicable to 5-year age groups over a period of 5 years and therefore one fifth of the values are taken as rates of retirement in one year.

APPENDIX V

METHOD OF ESTIMATING THE ISLAND'S LABOUR FORCE BY AGE GROUPS

The initial estimates of the gainfully occupied males by 5-year age groups are obtained by applying the rates of participation of 1943 to the Registrar General's end-of-year population for the males for 1952, within the age span 15-64. The process of carrying forward these estimates one year in time to the end of 1953 involves taking into account the following factors: (i) the mortality experienced by the 5-year age group centred on age x , which group is denoted here by P_x ; (ii) the movement of persons aged $x-3$, say p_{x-3} , into the age group centred on x , and the movement of persons aged $x-2$ out of that age group during the year; (iii) the accessions to the labour force during the year; and (iv) the retirements from the labour force during the year; and (v) the net migration of workers aged $x-3$ to $x+2$ during the year.

The mortality experience of the age group is taken into account by applying appropriate survival ratios derived from the 1953-54 life table. For the 5-year age group centred on age x , the survival ratio is $\frac{L_{x+1}}{L_x}$.

Estimates of the population aged $x-3$ and $x+2$ are obtained by interpolation on the basis of the three 5-year age groups centred on $x-5$, x and $x+5$, that is on the groups designated P_{x-5} , P_x and P_{x+5} respectively. Estimates of the two single year populations are therefore

$$p_{x-3} = +.088P_{x-5} + .144P_x - .032P_{x+5}$$

$$p_{x+2} = -.032P_{x-5} + .184P_x + .048P_{x+5}$$

Each of these is subject to mortality during the year so that the general correction to be made to P_x is

$$p_{x-3} \left(\frac{L_{x-2}}{L_{x-3}} \right) - p_{x+2} \left(\frac{L_{x+3}}{L_{x+2}} \right)$$

This computation can be considerably simplified by noting that

$$p_{x-3} - p_{x+2} = +.12P_{x-5} - .04P_x - .08P_{x+5}$$

and that within the age range considered here, 15-64, $\frac{L_{x+3}}{L_{x+2}}$

and $\frac{L_{x-2}}{L_{x-3}}$ are virtually identical. So that the correction to the 5-year age group P_x can be approximated by

$$\frac{1}{2} \left(\frac{L_{x+3}}{L_{x+2}} + \frac{L_{x-2}}{L_{x-3}} \right) (+.12P_{x-5} - .04P_x - .08P_{x+5})$$

In the case of the age group 15-19 the correction for the movement of persons into and out of the group is modified. On the assumption that there are some males aged 14 who are employed and that these are equal to about half of those employed at age 15, the corrections for the entry of those aged 14 into the quinquennial group centred on age 17, and the movement of those aged 19 from this group are

$$p_{14} = +.164P_{17} - .088P_{22} + .024P_{27}$$

$$p_{19} = +.088P_{17} + .144P_{22} - .032P_{27}$$

And the total correction to the age group 15-19 is

$$(p_{14} - p_{19}) = +.076P_{17} - .232P_{22} + .056P_{27}$$

Estimates of accessions during the year are obtained by applying the rates of accession discussed in the text to the mean male population, while the application of the rates of retirement to the same population gives estimates of retirement up to age 64. The migration balance is derived from the persons entering the island with the declared intention of seeking gainful employment and persons leaving the island in search of permanent employment.

By using the foregoing approach the initial population gainfully employed at the end of 1952 is carried forward to the end of 1953, and a similar set of operations carries it forward to the end of 1954, and then by the same means the estimate to the end of 1955 is obtained.

The following table sets out the detailed calculations in carrying forward the estimates of the males gainfully employed from the end of 1954 to the end of 1955.

Age Group	Labour Force 1954 (1)	Survival Ratio (2)	(1) x (2) (3)	p x-3 - x-2 (4)	p x-2 (5)	Survival Ratio (4) x (5) (6)	Accessions (+) and Retire- ments (-) (7)	Net Migration (8)	Labour Force (1955) (9)
15-19	39,718	.9983	39,650	-8,249	.9984	-8,236	+8,123	-488	39,049
20-24	60,621	.9973	60,457	-1,654	.9965	-1,648	+4,038	-2,296	60,551
25-29	49,945	.9963	49,770	+1,677	.9961	+1,670	+852	-2,713	50,119
30-34	44,993	.9964	44,831	+591	.9969	+589	+232	-1,969	43,683
35-39	45,028	.9950	44,803	+340	.9963	+339	+137	-1,390	43,888
40-44	40,729	.9921	40,407	+967	.9937	+961	-42	-1,016	40,310
45-49	35,095	.9903	34,755	+1,109	.9925	+1,101	-73	-643	35,140
50-54	29,681	.9806	29,283	+1,392	.9904	+1,379	-129	-290	28,864
55-59	20,403	.9800	19,995	+1,698	.9857	+1,674	-116	-116	21,437
60-64	13,089	.9698	12,694	+1,373	.9801	+1,346	-160	-34	12,500

Note. The survival ratio of column (2) is $\frac{L}{5}$ / L and that of column (5) is $\frac{1}{2}$ $\frac{L}{x+1}$ / $\frac{L}{x}$. The estimates given in columns (1) to (9) are for the years 1954 to 1959.

Note. The survival ratio of column (2) is $\frac{L}{5} \times \frac{L}{5}$ and that of column (5) is $\frac{1}{2} \times \frac{L}{5} \times \frac{L}{5}$. The estimates given in columns (1) and (9) are end-of-year values.

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APPENDIX VI

STUDY OF EXTERNAL MIGRATION AFFECTING JAMAICA. CIRCULAR

A study is being conducted on behalf of the Government of Jamaica to ascertain the effects of the current migration movements affecting Jamaican population and labour problems.

In order to supplement the general information which is being analysed, it is necessary to obtain specific data concerning the direct and indirect effects of this movement on certain industries.

It would be greatly appreciated if you could assist in these efforts by providing information, on the attached questionnaire, relating to your own business. All information received from individuals or organizations will, of course, be treated as strictly confidential.

It is realized that it will not always be possible for you to give exact figures. In that event any approximations you can give will suffice.

In view of the urgency of this matter we should be very grateful if the completed questionnaire could be returned in the enclosed franked envelope within a week.

c/o Dept. of Statistics,

93 Hanover St.,

Kingston.

Oct. 1956.

STUDY OF EXTERNAL MIGRATION AFFECTING JAMAICA

1. Name of Firm.....
2. Will you please supply as much of the following as you can for your organization.

Categories of workers employed	No. employed in 1955	No. who left your employ- ment in 1955	No. who emi- grated in 1955
(a) Carpenters	In Crop	Out of Crop	
(b) Masons			
(c) Plumbers			
(d) Painters			
(e) Chauffeurs			
(f) Tractor drivers			
(g) Mechanics			
(h) Electricians			
(i) Blacksmiths			
(j) Welders			
(k) Other skilled			
(l) General unskilled			

3. Please indicate categories of skilled workers or unskilled workers that you are experiencing difficulty in recruiting at present.
 Skilled workers.....
 Unskilled workers.....
4. State the type of workers which you find
 (1) Most difficult to obtain.....
 (2) Less difficult to obtain.....
 (3) Least difficult to obtain.....
 Are there any types of skilled workers which are in good supply at present?

- (Use lettering for categories as indicated for question 2.)
5. Have these movements of workers in any way hampered any training schemes you operate?

6. Have you observed any marked change in the quality of workers recruited by you during the past three years?
 (USE LETTERING FOR CATEGORIES AS INDICATED)
 Categories showing improvements.....
 Categories showing deterioration.....
7. Are there any general remarks which you would like to make on the subject dealt with in this questionnaire?

Signature

Date

APPENDIX VII

The list of basic tabulations prepared from the Embarkation/Disembarkation cards is given below. It will be seen that 10 of these cover arrivals and 17 cover departures. For each of the three years (1953-55) a series of 27 tabulations was prepared, and the 81 tabulations furnish the material on which the study is developed.

BASIC TABULATIONS FOR ARRIVALS

1. Total arrivals by sex, type and month of arrival
2. Arrivals to seek permanent employment by sex, place of departure and month of arrival
3. Arrivals to study by sex, place of departure and month of arrival
4. Arrivals to seek medical attention by sex, place of departure and month of arrival
5. Arrivals on holiday, by sex, place of departure and month of arrival
6. Arrivals of Jamaican born persons (resident abroad) by sex, place of departure and month of arrival
7. Arrivals of persons travelling on business by sex, place of departure and month of arrival
8. Arrivals of other types, by sex, place of departure and month of arrival
9. Arrivals to Jamaica to seek work, by sex, age and occupation.
10. Estimates of permanent immigration

BASIC TABULATIONS FOR DEPARTURES

1. Total departures by sex, type and month of departure
2. Departures to seek permanent employment by sex, ultimate destination and month of departure
3. Departures to study, by sex, ultimate destination and month of departure
4. Departures to seek medical attention, by sex, ultimate destination and month of departure
5. Departures on holiday, by sex, ultimate destination and month of departure
6. Departures of Jamaican born persons (resident abroad) returning to their country of residence, by sex, ultimate destination and month of departure
7. Departures of persons travelling on business, by sex, ultimate destination and month of departure
8. Departures of other types, by sex, ultimate destination and month of departure
9. Departures to the United Kingdom to seek work, by sex, age and occupation
10. Departures to the United States to seek work by sex, age and occupation
11. Departures to Canada to seek work by sex, age and occupation
12. Departures to the United Kingdom to seek work by sex, parish of residence and place of birth
13. Total departures by sex, type and mode of travel
14. Total departures by sex, ultimate destination and mode of travel
15. Total departures by sex, type and proposed length of stay
16. Total departures by sex, ultimate destination and proposed length of stay
17. Estimates of permanent emigration

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